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ABSTRACT

The study is a description of the activities undertaken within the framework of the work-oriented adult literacy pilot project in Iran, an evaluation of its first measurable results, and an examination of the problems of functional literacy in the light of the Iranian experiment. The first chapter traces the efforts of the Iranian authorities over the years in extending literacy from the privileged to the entire population and describes the aims of the pilot project. The second chapter is devoted to the problems of functional literacy training and the fuller utilization of human resources, defining the frame of reference for educational action and the noneducational conditions which govern it. Chapter 3 discusses the purely educational level of integration and the development of a methodology with tables, illustrating programs, training sequences, and teaching materials. Chapter 4 deals with the confrontation between the old and the new, and the development of an evaluation program. The final chapter raises questions related to future developments, the concept of life-long adult education, and the international consequences of the Iranian experiment. An appendix includes a bibliography and project documents. (MW)

ED 094243

No. 9

Possibilities and limitations of functional literacy: the Iranian experiment

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Preface

Since the approval of the Experimental World Literacy Programme by the General Conference of Unesco at its thirteenth session, in November 1964, the pilot project in Iran has been among those which have aroused the keenest and most lasting interest among experts in educational methodology. It may be said to have been a testing-ground for the so-called "ecological" approach to functional literacy. This approach consists first in identifying the difficulties which prevent productive workers from reaching a particular priority development objective, then in finding solutions to those problems, and, finally, working these solutions into very specific training programmes.

The present study is a description of the activities undertaken within the framework of the pilot project in Iran, an evaluation of its first measurable results and an examination of the problems of functional literacy in the light of the Iranian experiment. It thus follows on from the publication, in the series "Educational studies and documents", of a study on the literacy pilot project in Tanzania, and should be of interest both to those who feel particularly concerned with the progress of literacy and to the ever-increasing number of people who are seeking ways and means to promote a better adaptation of the educational processes as a whole to the aims and requirements of man and society.

The author of this monograph is Mr. Pierre Furter, a former Unesco expert in Latin America, who has worked with the International Institute of Educational Planning and who lectures in education at the University of Neuchâtel (Switzerland) and at the African Institute in Geneva. The fact that Mr. Furter is both a practitioner and a theorist in education and adult literacy makes his judgments particularly well-informed and acute. The author also has that faculty found among teachers and researchers of raising fundamental problems and stimulating trains of thought. This said, his assessments of various aspects of the Iranian experiment do not necessarily reflect the views of Unesco and are not the responsibility of the Organization.

We should like to take this opportunity of expressing our sincere thanks to all those who have contributed to the preparation of this study, in particular, Mr. Furter himself and the leaders and members of the national and international team for the Iranian work-oriented literacy project.

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Foreword

The Iranian contribution to the world literacy campaign has often aroused interest. It has been the subject of many reports, descriptions and even in-depth studies both by Iranian specialists and by researchers from all over the world(1).

In the specific case of the work-oriented adult literacy pilot project in Iran, a great deal of information has already been established, either directly by the organizers of the project, who have been highly productive, or by consultants, members of the Unesco Secretariat and interested outsiders(2).

Although during the first two years of the project, no archives or documentation system were set up, the evaluation section has, since 1969, gradually organized the mass of available documents and data. The International Institute for Adult Literacy Methods also put its library and extensive documentation at our disposal. However, it was not enough, for the needs of the present study, simply to use this material; it was also necessary to define our objective so as not to repeat what has already been said and written.

As a result of a visit to the field - no doubt too short for us to grasp all the implications of the information with which we were so liberally supplied - we adopted an approach which, like any predetermined attitude, is open to criticism. It seemed, however, to correspond best to the spirit of the Iranian project, which is one of inventiveness. By this we mean that the team working on the project has shown creativity and a pioneering spirit, even though they may not always have known how to introduce, multiply and spread their discoveries, through lack of an innovation strategy.

Hitherto, on the basis of our experience in Latin America, we had thought that the translation into practice of the prospects for functional literacy revealed at the Teheran Conference had been muddled. It thus came as a shock to us to find that this conception of literacy could in fact be achieved in practical terms, when the national and international teams in charge of the experiment were willing to take a risk and adopt the working hypothesis that functional literacy was something they had to create for themselves, and that there could therefore be no question of applying ready-made formulae and even less of implementing plans established on an a priori basis. In describing the project, we had also to show that the present stage has only been reached as a result of an operational action which has included many hesitations, fumblings and sometimes mistakes. The results obtained, which we would go so far as to say were not only interesting but also positive, raise further questions; moreover, success has perhaps also hardened resistances, showing that invention is a calling in question of what has already been achieved and that innovation is more than merely the dissemination of new ideas.

All this confirms how difficult it is, especially in the field of education, to be inventive. But while this is sometimes considered as a reason for giving up any hope of change or as the justification of an over-cautious and sceptical attitude, the increasingly coherent and dynamic character of the Iranian project proves, by the very tenacity of the team in charge, who were determined to carry it through to its ultimate conclusions, that there are also grounds for hope.

The plan and structure of our interpretation followed on from the approach we adopted.

The lengthy research which went into the pilot project would not have been possible in any but the Iranian context, in which civilization has always primarily meant written culture, even to the final refinement of transforming a means - writing - into an aesthetic end - calligraphy - in which form and content are perfectly merged. The first chapter of this study therefore emphasizes how much

1. Annex I proposes a selective bibliography of the material which is most easily accessible to foreign researchers.
2. Annex II gives a list of all the more important documents which have come to our notice and which we have been able, at one time or another, to consult on the spot.

the pilot project has benefited from the constant determination of the Iranian authorities to extend to the whole of the population what has been for thousands of years the privilege of the literate alone.

Beyond this general aim, the pilot project has made it possible to define the contribution made by literacy work towards the solution of the present-day problems of Iran, which claims not only to be modernizing itself but also to be gradually drawing all the human resources of the country into the national development projects. This objective, which is emphasized in the title of the project - "work-oriented" adult literacy pilot project - presupposes a high degree of integration of training work with everything that can or should develop and promote human potential in each of the actual development projects; the second chapter of our study is devoted to the problems of this inter-sectoral operation.

In addition to this first level of integration, which defines the frame of reference for educational action and the non-educational conditions which govern it, there should also be a second level of integration, this time purely educational. As the Iranian project has particularly developed this aspect, we have given it a certain emphasis in Chapter III.

In a country where there are everywhere strong contrasts between a glorious past and a present which is becoming more and more closely associated with the so-called "modern" world, the pilot project could not avoid confrontation between the old and the new. We have tried to bring this out in Chapter IV.

Finally, in the last chapter, which could also form the first chapter of a new experiment, we have raised the question of how to complete an experimental project without ending it, i. e. how the end of this project could be the beginning of further development enterprises.

We hope that this interpretation will enable the reader to get a better idea of all that is involved when a State freely decides to take part in the Experimental World Literacy Programme. We should like this study to arouse the curiosity and interest of other researchers in such experiments, which bring one into direct contact with the problem areas of what has been called the "world education crisis". However, we must acknowledge that our work can only serve as an introduction, as seen by an educator. To show clearly where our interpretation begins and ends, we have refrained from quoting any references, so as to assume sole responsibility. It is only when all the documents included in the publications plan of the project[1] have been published during the course of this year, and the evaluation team has circulated the results of its detailed investigations that it will be possible to produce a systematic, interdisciplinary, overall work which we are convinced will make a decisive contribution towards the renewal, not only of the concepts of literacy and adult education but also of modern education in general.

Lastly, we should like to express our profound gratitude to all those who have helped to make this work easier: to the members of the Secretariat of Unesco, who gave us the fullest possible freedom to carry out this mission and coped marvellously with all the material difficulties; to our Iranian and international colleagues, who opened all their dossiers and replied with the greatest frankness and sometimes with disconcerting critical awareness to our sometimes pointed or complicated questions; to the Resident Representative of the United Nations and his associates, who solved all the practical problems in the field and smoothed the way for all the contacts we wanted with the Iranian authorities; but above all to the Iranian authorities, who not only imposed no restrictions on us but, on the contrary, took an interest in this attempt to understand the facts of the situation, which we should like to have carried further had we had sufficient time and especially if we had understood Persian. We hope that the result of our work, however modest, gives a true picture of this project in which so many people have placed so much hope.

1. See Annex III.

Chapter I

From one type of literacy training to the other

"As hereditary Head of State of one of the world's oldest civilizations and representative of a thinking which has for centuries identified the struggle for the principles of truth, purity and light with that which the defenders of Good must wage against the forces of Evil, I cannot conceal my fullest solidarity with all men of goodwill who are today engaged in the world struggle against illiteracy."

(Message of H. I. M. the Shahinshah to the thirteenth session of the General Conference of Unesco, October 1964)

A FAVOURABLE CONTEXT

If we were to draw up a balance-sheet listing the factors that have favoured the development of the Iranian project, the chief among them would probably be the continued interest that the government - under the direct and personal influence of His Imperial Majesty the Shahinshah - has displayed for the past decade in all the activities which have sought to vitalize, intensify and accelerate literacy work. It is a natural extension of this interest that the Iranian authorities, represented by Her Imperial Highness Princess Ashraf, should be closely associated with Unesco's undertaking, which seeks to unite all Member States in a common effort to eliminate this cultural inequality which, it is increasingly realized, is an intolerable injustice. In 1965, on the initiative of the Shahinshah, Unesco convened, in Teheran, a World Conference of Ministers of Education on the Eradication of Illiteracy. Two years later came the institution of the Mohammad Reza Pahlavi Prize, intended to reward meritorious work in literacy teaching each year. Subsequently the International Institute for Adult Literacy Methods was set up in Teheran in order to serve as a meeting point and a place for discussion and comparison by educators from all over the world engaged in various types of literacy work.

This commitment to the idea of international co-operation was bound to have repercussions on the Iranian experiment, in which there has been an increasing concern for efficiency. Having taken on so much already, why not try to do still more? And since the country is endeavouring, in every way, to advance by its own efforts along the path of modernity - without, however, repudiating its ancient past - why not create a vanguard movement in literacy as well?

Iran's direct participation in the Experimental World Literacy Programme stemmed quite naturally from its cultural experience. A country which, in the course of its history, had so often assimilated influences, either freely accepted or imposed, and given them new creative force, could tackle new experiments imaginatively. It was in this spirit of fair competition, free from any animosity or hostility, that the work-oriented literacy pilot project was devised, prepared and implemented.

Before describing the work achieved by the team of national and international experts, it might be useful to make a brief reference to the background against which this action takes place and will be viewed. Granting that functional literacy work is based on three conceptual premises - a survey of research into illiteracy considered as a complex phenomenon whose salient features as a whole must be identified, an assessment of comparative studies which have revealed the limits of traditional literacy teaching methods, and a number of working

hypotheses, more especially those formulated at the Teheran Congress - we should begin by asking ourselves how far these have been carried in Iran.

The buden of illiteracy (Poster used in the pilot project in Iran)

THE MULTI-DIMENSIONAL NATURE OF ILLITERACY

Bordering the Dezful sub-project area, about 30 kilometres from one of the centres in which a new literacy teaching methodology is being developed, stands a large roadside village. Were it not for its name, Shush, it would certainly not claim our attention. It is all that remains of the ancient Susa, which became the winter capital of the empire of the Achaemenids under Darius the Great. But, more important to us than the aura of the capital, is the fact that Susa was a site where, over millenia, several great cities succeeded one another and where, perhaps, the urban phenomenon emerged for the first time. It may have been this invention of the town that allowed the succeeding cultures to emerge. The organization, functioning and activities of highly concentrated populations led to the use of picture-writing, the origins of which must go back to the proto-Elamic era, i.e. about 3,000 B.C. Today, 5,000 years later, the metropolis which has become a village struggles along in a region where 85 per cent of the population are illiterate: the instrument of culture has not survived the disappearance of the circumstances attending its birth.

Iran, which is thus one of the countries in which writing was invented, has contributed to the development of this art at other periods in its history as well. The Iranians continued to write in their own Persian language, though in a script imposed on them by the Arab conquerors, and indeed achieved such skill that they are reckoned among the masters of Arabic calligraphy. The traditional importance attached to calligraphy, with its complex and harmonious movements which encourage self-expression, did not escape the attention of the pilot project organizers, who tried to give it a special place in the training methodology.

And yet, in spite of this aptitude for creative assimilation, this civilization, in which writing has been so important for thousands of years, has only become aware of the problem of illiteracy within the last century. This was due to the fact that the use of writing was restricted to privileged minorities. Whereas the purpose of writing could be utilitarian - even accounts were recorded on tablets in ancient Susa - there were other functions that took precedence over the utilitarian aspect. J. Goody has listed a dozen in the Mesopotamian cultures. (1)

Table 1. The traditional functions of writing

Recording data for future use	ADMINISTRATIVE PURPOSES CODIFICATION OF LAW FORMULATION OF A SACRED TRADITION FOR ANNALS
Communication of data	LETTERS ROYAL EDICTS PUBLIC ANNOUNCEMENTS TEXTS FOR TRAINING SCRIBES
Communication with gods	

1. J. Goody (ed), Literacy in traditional societies, Cambridge University Press, 1958, p. 21.

Most of these functions are conservative in character, writing being used to perpetuate customs and avoid innovations. It was also the preserve of castes who tended to emphasize its esoteric character. Ultimately, writing served only as a means of communication between a handful of initiates - which meant that it remained a mystery to the masses. These cultural characteristics explain why even today illiterates are not bothered about their illiteracy if an intermediary is available (the scribe, the public letter-writer in the village, etc.). Hence the reactions of the peasants in northern Iran who asked to be paid for learning to read and write. They were not conscious of illiteracy as being their problem; it was somebody else's. The wide range of literacy's cultural functions also prevents the illiterate from seeing that it has any close bearing on the exercise of a trade.

To these cultural difficulties may be added the sociological gap. While the essential elements of civilization were transmitted from person to person by the traditional forms of communication in the rural areas, the use of writing as a medium was not felt to be necessary. Traditional agricultural techniques may therefore still be improved to a large extent without literacy training, although this no longer seems to be true for modern techniques. The importance of literacy is undisputed in urban areas, where the density of population and the complexity of human relations make human exchanges, and consequently communication by word of mouth, somewhat uncertain. It is here that writing becomes a necessary medium. As the differences between the urban and rural worlds recede, illiteracy will come to be recognized as a problem. Similarly, the desire to integrate all the human resources of a country, to increase its capacity for development or to give a wider basis to nationalism, brings to light the illiteracy of a number of minority groups (in Iran, this was the case, for example, with regard to the integration of the nomadic tribes).

This gap between the literate and the illiterate, which has come about through mutual ignorance and indifference, is wider in Iran on account of the fact that Persian has become an eminently literary language. As the great literary works, symbols and illustrations of the national culture, were written in Persian but in Arabic script, the present transcription, although it does not render the vowels satisfactorily, has become untouchable. The experts of the Iranian project found little response or understanding when they sought to interest the linguists of the country in the study of a number of technical difficulties such as the systematization of written forms (the pronunciation of certain homographs depends on the meaning, which has to be deduced from the context), the simplification of the spelling of a language which contains a large number of signs and characters, or the revision of an excessively complicated grammar.

In addition to these problems, which those responsible for literacy work should consider when they choose a frame of reference,[1] there are other problems which inevitably have far-reaching repercussions on the development of a methodology[2]. Firstly, it would seem that illiteracy is linked, on the purely psychological level, to a concrete and largely non-conceptual way of thinking, in which there is great difficulty in transferring acquired knowledge from one situation to another. The illiterate is not good at understanding causal relationships and consequently has difficulty in grasping physical and natural laws. This thinking is situated at a behavioural level which may be described as "a-technical". There are other limitations, such as the inability to interpret a visual image as a representation, which make the illiterate quite insensible to visual messages in the form of diagrams, charts, etc. Similarly the illiterate is sloppy and inaccurate in assessing measurements. Finally there is the socio-psychological aspect, i. e. the influence of the group on the behaviour and changes of attitude of the individual, especially at this stage of cultural development.

So far this has not been shown systematically in Iran, although direct observation of a number of the above-mentioned facts has already served as a point of departure for working out the methodology of the Iranian project.

THE SUCCESSIVE STAGES OF LITERACY WORK IN IRAN

Up to the end of the nineteenth century, popular education in Iran was provided only by the Koranic schools ("mektab") which accepted adults as well as children. Even today this informal system of instruction trains about 8.4 per cent of men in the towns and 4 per cent in the country areas. It was only very late in the day that the Iranian State shouldered some of the responsibility for primary education: in 1910 there were still only 113 schools, with 10,531 children. It was only under the reign of Reza Shah, from 1925 to 1940, that public instruction for the masses became a specially favoured instrument of a nationalist policy and a virtual monopoly of the State. Although, as a result of this effort, the number of schools doubled and the number of pupils increased fourfold, this expansion was only felt in the major urban centres and made very little difference to the level of education of the country people. Even the evening classes for adults, which were started in 1936 by the new Department of Adult Education in the Ministry of Education, did not extend beyond the towns.

During the particularly difficult period which followed, several attempts were made to improve this situation: thus in 1943, assistant teachers were introduced; in 1949 the length of compulsory

1. See Chapter II.
2. See Chapter III.

schooling was reduced to four years, to make up for the increasing lack of teachers, particularly in the rural areas; in 1946 adult education was reformed so as to enable the private sector to participate; and finally, in 1953, a Department of Basic Education was set up, to look after community development and popular education in rural areas. The census showed that 85 per cent of the population was illiterate - 78 per cent of men but 93 per cent of women. (See table 2).

Table 2. Numbers and percentages of literates by age group in 1956

Age group	Numbers			Urban population	Rural population
	Total	M	F		
10 - 14	513 593	354 513	159 080	369 036	144 557
15 - 19	316 236	224 818	91 418	237 996	78 240
20 - 24	237 302	177 318	59 984	184 620	52 682
25 - 34	382 700	297 536	85 164	280 369	102 331
35 - 44	223 049	187 992	35 057	160 303	62 746
45 - 54	123 544	108 897	14 647	87 814	35 730
55 - 64	73 480	66 229	7 251	49 623	23 857
65 and over	39 995	35 845	4 150	25 813	14 182
Total[1]	1 910 630	1 453 676	456 954	1 396 150	514 480
	Percentages				
10 - 14	28	36	19	59	12
15 - 19	22	32	13	46	9
20 - 24	16	25	8	33	6
25 - 34	13	21	6	31	5
35 - 44	12	16	4	27	5
45 - 54	9	15	2	19	4
55 - 64	7	13	2	16	4
65 and over	5	9	1	12	3
Total[1]	15	22	7	33	6

Source : *Population Census 1956* Vol. II

1. Population aged 10 years and over, including unspecified age-groups.

The results of the population census aroused public interest. Awareness campaigns were organized; a "holy war" was declared on illiteracy; intensive courses were set up and the number of classes for adults multiplied. Thus between 1956 and 1964 some 4 million illiterates, of whom more than half passed the final examinations, were involved in the literacy campaign. Finally, and above all, large numbers of primary schools were built, although it was not always possible to find the necessary teaching staff, particularly in the country. Thus in 1961-1962, when 79 per cent of children of school age could attend school in the towns, only 24 per cent could enrol in the rural areas. So as to eliminate once and for all this gap between the country and the towns, H. I. M. the Shahinshah proposed a programme of reforms which was adopted in January 1963. This "white revolution" led to the establishment of a number of "revolutionary corps" - the Health Corps, the Development and Extension Corps, the Literacy Corps, etc. Among other objectives, the "white revolution" aims to achieve electoral reform, including votes for women; it introduces the right of workers' participation in enterprises; and above all it aims for the nationalization of the crown estates and agrarian reforms. The "Literacy Corps" (or Education Corps) was set up to stimulate local political

activity, to fill the gap caused by the dispossession of the big landowners, and above all to use all the country schools, even the most isolated, and to provide basic primary instruction for all children. This corps, like the others, also has to organize literacy classes for adults. It gives secondary school leavers the choice of doing their military service as primary school teachers ("sepahis") after a six-month period of initial training. At the end of their military service, they may, if they so wish, take up education as a career and be employed by the Ministry of Education as school teachers.

The contribution of the "sepahis" has been considerable. In 1969-1970 - i.e. seven years after their establishment - 21 per cent of the school children in rural areas were being taught by sepahis, but the extent of their school teaching duties does not give them much time for literacy work or for adult education. In 1969-1970, while they had responsibility for 11,942 classes totalling 386,765 children, they were only conducting 3,973 classes for 72,530 adults. Moreover, the purely scholastic syllabuses and rather elementary teaching techniques in which they have been trained somewhat limit their action: despite their goodwill, they can hardly provide more than a fairly sketchy form of literacy instruction. The following example does not seem to be exceptional: out of 2,026 adults who registered for the first-year course, only 44 attended the second part of the course.

Two Literacy Corps sepahis talking to a peasant taking part in the pilot project

These first large-scale efforts have nevertheless produced a marked improvement in literacy, as shown by the 1966 census. (See table 3).

Table 3. Literacy 1956-1966

a) Female population

	1956			1966		
	Population of 10 years and over	Literates	%	Population of 10 years and over	Literates	%
Country as a whole	6 241 850	456 954	7,3	7 989 606	1 320 384	16,5
Urban areas	2 014 408	414 263	20,6	3 209 182	1 156 741	36
Rural areas	4 227 442	42 691	1	4 780 424	163 643	3,4

b) Population as a whole

	1956			1966		
	Population of 10 years and over	Literates	%	Population of 10 years and over	Literates	%
Country as a whole	12 784 031	1 910 630	14,9	16 535 844	4 649 841	28,1
Urban areas	4 186 881	1 396 150	33,3	6 746 439	3 310 769	49,1
Rural areas	8 597 150	514 480	6	9 789 405	1 339 072	13,7

Source: *Iran Almanach* 1969, p.496

Although these results were encouraging, they were not considered sufficient. In January 1965, therefore, the National Committee for Literacy was set up; after the Teheran Congress, this became the National Committee for the World Literacy Programme[1]. With H. I. M. the Shahinshah, as President, represented by H. I. H. Princess Ashraf, Vice-President, the Committee began to prepare a national campaign, organizing an initial experiment in the Kazvin region near Teheran, then a second in the Shiraz region. Without waiting for the results of an evaluation of the two experiments, the Committee considered that they were a sufficient basis for the finalization of its teaching material. It then launched the National Campaign and extended its activities over the whole of the country, through a network of regional and local committees.

At local level, each of the 150 committees now in existence has to fulfil numerous functions, of which the most important are:

(a) to collect statistics on children from 6 to 12 years who have not been able to enrol in schools - the latter have priority over those over the age of 13, who are considered as adults;
(b) to train "monitors" who, when employed, are paid on a pro rata basis according to the number of their pupils who pass the final examinations certifying that they are literate;
(c) to supervise classes, the complete syllabus of which extends, in theory, over two six-month periods (which should enable pupils to reach a level of education equivalent to that of the fourth year of primary school).

The National Committee is responsible for evaluation and the preparation of programmes and of teaching materials and for ensuring the financing of the programme, partly through voluntary contributions, but largely through a subvention granted by the Plan Organization and calculated on the basis of 2,000 rials per successful pupil. These resources are supplemented by a levy from municipal authorities which amounts to 5 per cent of their revenue.

The National Campaign as organized at present corresponds fairly closely to the criteria which the Teheran Congress had proposed for traditional literacy campaigns:

its action is widespread, i. e. it seeks to reach the greatest possible number of illiterates;
pupils are selected on a purely territorial basis;
its action is extensive, since it seeks to transmit to adults a level of knowledge which corresponds exactly to the contents of the primary school syllabus;
its objectives are essentially scholastic and, in this particular case, are restricted to reaching the level of the fourth year of primary education;
so far only one textbook has been used but, under the influence of the pilot project, an effort has been made to vary the material, beginning with the readers.
now three first readers are used (one for rural areas, one for urban areas, and a third for the population of Azerbaijan) and 19 supplementary booklets.

Although no definitive evaluation study has been made giving an objective picture of the results obtained after four years of work, it is nevertheless possible to state that the National Campaign is running into increasing difficulties, which include:

the rise in the cost of literacy work, due to the increasing rate of dropping out and repeating;
the marked decrease in initial enrolments for the courses;
poor retention of knowledge;
the very high percentage of women and children among the participants.

Following the National Conference on the Elimination of Illiteracy, the Government decided that the National Committee would no longer be responsible for the implementation of the programmes. Its competence would be limited to the planning, financing and supervision of so-called "traditional" literacy activities.

This very brief summary of the efforts which Iran has made to encourage the cultural development of its least privileged citizens is, we think, sufficient to show that this country has tried all the methods so far used in the sphere of popular education. It was therefore not surprising that Iran was one of the first countries to show interest in the principles laid down by the Teheran Congress. As none of the previous national efforts had been subjected to rigorous evaluation, it was hoped that Iran's participation in the Experimental World Literacy Programme would encourage critical reflexion whilst diversifying the methods used and extending the range of possible comparisons.

THE PRINCIPLE OF FUNCTIONAL LITERACY TRAINING AND THE AIMS OF THE PILOT PROJECT

The Teheran Conference, in 1965, defined functional literacy in terms of three criteria, which were to be adopted from then on in all literacy training projects. Functional literacy was any literacy training operation which was centred on development, and integrated in it, and which entered as a component into a specific development project. This formula, as we see, did not define the term functional or indicate how literacy could be made functional.

When the Iranian Government submitted its request to the United Nations Development Programme in 1966 the definition was still very vague.

1. Also called the National Committee for the World Campaign against Illiteracy.

It might be summed up as a programme going beyond mere literacy training. In other words, functional literacy training was literacy training along with something else which it was precisely the function of the pilot project to try to identify. The 1967 Plan of Operations does this by a process of elimination. Functional literacy will not be confined to learning the elementary mechanisms of reading, writing and arithmetic, but will give adults of both sexes the general and technical knowledge necessary for the individual, vocational, social and cultural training which will make it possible to transform society through development. It was not until the Iranian project was revised, in 1970, that a positive and precise definition was given: functional literacy training was defined as a technical and cultural promotion activity, integrating vocational training, an introduction to science, mathematical instruction, civic and socio-economic training and the learning of reading and writing in a synchronized process, designed to encourage increased productivity on the part of workers, facilitate their integration in a society undergoing rapid modernization, and hasten development.

On the basis of the trends emerging from the Teheran Conference, the Secretariat prepared guidelines for the execution of this work-oriented literacy project. The strategy was to be selective, the type of training intensive, and the contents of the educational programme were to be integrated. When it came to submitting the request in 1966(1) the purpose of the pilot project was expressed in very vague terms:

it should help to set up an intensive, work-oriented literacy training project linked with economic development in Iran;

it might comprise a central administration, a research centre in Teheran and three pilot experiments in different parts of the country.

The Plan of Operations drawn up on this basis entered into greater detail:

the pilot project should assist the Iranian Government in developing a work-oriented adult literacy pilot project in an irrigated agriculture development zone and an industrial zone;

as part of the experiment, the pilot project would establish two permanent training centres for the instructors required for its implementation.

However, here too, it was not until the project was revised that two precise aims were formulated. These were to help the Iranian Government:

to devise, prepare and implement a series of functional literacy training programmes for workers of both sexes aged from 14 to 45 in homogeneous social and occupational groups ; and

to evaluate the impact of these programmes on economic growth and social change in the two regions selected for the experiment, in particular, by measuring its effects on the behaviour, attitudes and qualifications of workers.

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1. The request was re-formulated following a UNDP-Unesco mission, the Iranian Government deciding, in particular, to forego the third pilot experiment originally planned.

Chapter II

Functional literacy training and the fuller utilization of human resources

"What is the craftsman's duty?", the wise man asked the Spirit of Wisdom.

The Spirit replied, "This is the duty of the craftsman, that he should not undertake any work for which he is not fitted, and that that work for which he is fitted, he should perform with care and ask a just wage for it. He who insists on doing work for which he is not fitted spoils the work and makes it worthless; if in addition he is satisfied with his work, then it even leads him into sin."

Dâdist An f Mênôg f Xrad
(VIIth century, Sassanid period)

THE FRAME OF REFERENCE OF FUNCTIONAL LITERACY TRAINING

At first glance, functional literacy work has something reassuring about it: since it is a part of something else, of a project which has already been planned, organized and programmed, it should be enough for the educators who carry it out to know that frame of reference in order to deduce the educational needs and the means of meeting them. Experience shows, however, that this is not always so clear and that the educator is well advised, if he wants to avoid subsequent disappointments or inextricable difficulties, to ask himself a series of questions with a view to finding out whether the educational work for which he is responsible is actually implicit within the frame of reference, or is considered as a possibility or overlooked altogether. Some of these questions are simple. Is there sustained economic growth guaranteeing the permanence of the economic projects during the fairly long period (4 to 5 years) required for establishing the literacy training projects linked with them? Is this economic growth planned? Is the development of human resources taken into account in such plans? Is there an employment policy? There are other, more difficult questions. Is the employment policy, for example, applied at regional and local level? What bodies apply it? Does it extend to all sectors of the economy? Should all development projects keep to it? Sometimes questions arise which cannot be answered, at least not officially, for instance, why have there been several changes of direction in employment policy?

We realize of course that it is not for the educators to answer these questions alone, and still less to search for solutions to problems outside their sphere of competence. However convinced an educator may be of the need to develop human resources if economic growth is to become real development, it would be technically and politically difficult for him to propose a human resources policy. On the other hand he is entitled, we think, to ask for, even to demand answers to these questions from the appropriate bodies, so as not to spend his time training people who will subsequently be unable to find employment, not to make mistakes in the selection of candidates for admission to courses and even, as we shall see in the following chapter, not to devise methods which are ultimately as remote from the realm of reality as the most traditional school curricula. That is why, as an educator, I have asked these questions in connexion with the Iranian pilot project.

3

Expectation: farmers at a pilot project course

GROWTH AND DEVELOPMENT IN IRAN

Seen as a whole, Iran's development over the past ten years is reassuring to the educator. If one takes per capita income, Iran is one of the front-runners among the developing countries with $245. Not only has the rate of economic growth been remarkably rapid and regular, but it even seems to be becoming more rapid. Between 1959 and 1965, the Gross National Product increased by 6.6 per cent and by the end of the Third Plan (1963-1967) the rate of growth was estimated variously at from 8 to 12 per cent. This growth is doubtless due mainly to the extraction and processing of oil and natural gas, which still account for 11 per cent of the GNP. The massive contribution which this sector makes to the economy - oil is the main source of public investment - will probably continue in the near future in view of Iran's favourable situation on the oil market, particularly following the recent Teheran agreements and the country's extensive accessible reserves. In addition, it will soon be possible to work the deposits of copper and other non-ferrous ores which have been discovered.

Nevertheless, the diversification of the Iranian economy also contributes to the growth and development of exports which, in addition to petrol, have so far included cotton, carpets and dried fruits. Relatively speaking, the fastest-growing sector is the industrial sector; this may be a result of the introduction of new light industries or of the modernization of traditional branches of industry such as textiles, or again it may be due to the setting-up of large complexes of heavy industry which, it is hoped, will later have a multiplier effect. While the contribution of agriculture to the GNP fell between 1959 and 1966 from 34 per cent to 24.5 per cent, during the same period industry's contribution almost doubled (from 8.7 to 14.2 per cent). It is therefore reasonable to expect that there will be increasing need for skilled labour in industry, which will involve both the accelerated training of a specialized labour force and the further training or re-training of the traditional labour force, or alternatively the occupational conversion of that part of the population which was previously living in a rural environment, but has now moved to areas where industrial complexes are being set up from scratch.

The situation is very different in agriculture. Not only does this sector produce only one quarter of the GNP while employing half the available labour, but its growth rate is 2.4 per cent, i.e. less than the population growth rate (2.6 per cent). The inadequate level of productivity in agriculture forces the government to import rice, sugar, vegetable oil, etc. It might give rise to serious problems if the food deficit were to increase. There are many factors involved in this situation. Despite its size, Iran has hardly 4 per cent of cultivated land, since the greater part of the country's surface-area is covered with high plateaux which are semi-deserts, and large salt deserts. Of the 19 million hectares of cultivated land, half are reckoned to be lying fallow, and a quarter given over to pasture. This is why, while the average population density is 15 to the square kilometre, it is 360 to the square kilometre of cultivated land. Moreover, not only is there a lack of land, but there is an even more serious shortage of water: suffice it to recall that three-quarters of agricultural production comes from irrigated land. Finally, we can assume that ignorance of modern methods in the production and marketing of products is also creating a bottleneck in the development of the agricultural sector. The government has accordingly carried out wide-ranging structural modifications. Thus the agrarian reform introduced in the framework of the "white revolution" forbade the big landlords to own more than one village, and ruled that they must sell off any excess land. Elsewhere, the construction of dams has allowed the development of irrigation systems and the replacement of traditional systems of water distribution which in some cases dated from the very earliest period of Iranian civilization.

Table 4. Breakdown of the economically active poupulation among occupational groups by educational level

Occupational [1] Groups	Working Population %	Illiterate Working Population %	Literate Working Population			Total %
			Primary School %	Secondary School %	Higher Education %	
0. Agriculture	46.2	55.4	27.1	3	0.9	21.2
1. Extractive industries	0.74	0.3	0.5	0.5	0.5	0.5
2/3. Manufacturing industries	18.5	18.4	21.7	12	6.7	19
4. Construction	7.4	8.1	6.6	2.3	3.3	5.6
5. Electricity, gas, water	0.8	0.5	1.4	2.2	1.9	1.6
6. Trade	8	5.3	16	15.6	6	15.5
7. Transport	3.3	2.3	6.1	6	2.2	5.9
8. Services	13	8.1	18.4	55.4	75.2	28.3
9. Other and unspecified groups	1.8	1.6	2.2	3	3.3	2.4
Total	100	100	100	100	100	100

Source : A. Ahmadi, Etude de la situation de la population active en Iran : Ministry of Higher Education Research Centre, 1969

1. 0 = primary sector
   1 to 5 = secondary sector
   6 to 9 = tertiary sector
   total of secondary sector = 27.1 per cent of the active population
   total of tertiary sector = 26.7 per cent of the active population

After this short review of the salient facts of Iran's recent development, then, we can conclude that the country has entered on a phase of change enabling her to make fuller use of her human resources. However, the schemes and development plans to which we referred would not seem in all cases to have been sufficiently systematic, or to have resulted in the definition of a clear policy for fuller utilization of human resources. Indeed, it was only in 1968, i. e. two years after the start of the Iranian work-oriented literacy project, that the Fourth Plan (1968-1972) stressed the need to establish a better balance between the educational system and the increasing and diversified labour requirements of the various sectors of production. It was also this Plan which first pinpointed the basic difficulties encountered in the overall development of the country:

the illiteracy and low level of occupational qualifications among peasants (Chapter VII, paragraph 5);

the need to increase agricultural productivity by spreading modern production and farming techniques throughout agriculture (Chapter VII, paragraph 6);

the improvement of productivity in industry (Chapter VIII, paragraph 20);

the vocational training of mine workers (Chapter VIII, paragraph 25).

We shall perhaps have to wait for the Fifth Plan (1973-1977), which is at present in preparation, before a start is made on other basic problems such, for example, as full employment in a country where the economically active part of the population makes up scarcely 28 per cent of the total, and where the youthfulness of the population (55 per cent of inhabitants are under 20) is going to pose the problem of finding employment for young adults. Thus, according to a study of employment in Teheran, carried out in 1966, whereas underemployment is estimated at 4. 6 per cent among men and 4. 0 per cent among women, for the whole population over the age of 15, the rate is twice as high in the case of young adults between 15 and 24: 9. 3 per cent among men and 10. 3 per cent among women.

Another important task with which the Fifth Plan is apparently going to be faced is the regionalization of development, as indispensable in such a varied country as it is difficult in the context of a

traditionally centralized political and administrative structure. This might result in a complete reorientation of the extension phase of the pilot project, which up to now has been planned in the traditional administrative framework of the "ustan" (provinces).

It is in this context, full of promise but also of change and uncertainty about precise aims, that the Iranian literacy project was conceived early in 1966 (request to UNDP), defined at the end of 1966 (Plan of Operations) and implemented until 1970 when the Plan of Operations was revised. Thus the Iranian project must be seen in the context of a period which covers the completion of the Third National Plan and the beginning of the Fourth.

THE OPERATIONAL AREAS AND SECTORS OF THE IRANIAN WORK-ORIENTED LITERACY PILOT PROJECT

In the form in which it was first conceived, and in which it appears in the Iranian request to UNDP, the project covered three experimental areas which had been chosen for the following reasons:

they seemed to correspond to three typical situations of change in Iranian society;
the experience acquired could easily be used in other similar situations in Iran;
in each of the three cases, illiteracy was hampering the economic growth of the area in question.

The first project with which we are concerned was the Greater Dez irrigation project in the province of Khuzestan, a purely agricultural region which was going through a period of rapid change because an irrigation network connected to the Pahlavi dam, on the river Dez, had been constructed and brought into service. This pilot area, situated near the town of Dezful, might be the model for fourteen other irrigated areas in Khuzestan, as soon as the dams on the rivers Karun and Marun were brought into service.

The second experimental area was the town of Esfahan, which was chosen because it is the second town of Iran, and because it has a dense concentration of traditional craft workshops and textile factories which are in process of modernization. The installation of the metallurgical complex seems not to have been the focus of attention. It was felt that the experience acquired in the area of craftwork could be used in the neighbouring towns of Shahreza and Najafabad; but it was also felt necessary to extend the pilot project to the surrounding rural area, since the metallurgical complex would be drawing on labour from that area. An additional reason was that the Esfahan area seemed to be growing fast and that its development would be multi-dimensional.

There was also a possibility that some of the experience acquired at Esfahan might be applied to neighbouring towns like Shahreza or Najafabad, and conceivably to Shiraz and even Tabriz, in the north of the country.

Lastly, three districts bordering on the Caspian - Badol, Shahi and Sari, in Mazandaran province - were chosen. This is a very densely populated agricultural region, where the land formerly belonging to the Imperial Crown was sold to the farmers as part of the "white revolution". The Omran Bank, an agricultural development and co-operation bank, was put in charge of the administration of the operation. The bank established a system of agricultural credit and set up an agricultural extension service. It looked possible to extend the experience acquired to other districts of the same province, or to districts of the province of Gilan, with the help of the same bank.

Apparently, for administrative reasons, the Iranian Government preferred to cut down the number of experimental areas. The pilot project therefore covered only two areas, which, in the Plan of Operations, became the Dezful sub-project and the Esfahan sub-project.

Thus, in the form in which it got under way at the end of 1966, the Project, according to the Plan of Operations, comprises various sectors: two rural development sectors - one at Dezful, the other in the Esfahan region - and three industrial development sectors, also in that region.

The work to be carried out under the Dezful subproject has the advantage of being, at least in its early stages, clearly defined. North-east of Dezful is the biggest dam in Iran, the Mohammed Reza Shah Pahlavi dam, work on which started in 1962, and which has recently been filled with water. This dam is to supply both electricity to a province in full growth (because of the oil in the south of the province) and water to an area which, although it has been fertile since the earliest times, had a traditional system of irrigation that no longer allowed the land to be used to the best advantage. The "dry farming" method, too, is no longer satisfactory there, because of the rainfall characteristics. The aim of this vast development operation is to ease the passage from traditional agriculture to modern mechanized agriculture over an area of 125,000 hectares, 85,000 of which are cultivable. By introducing intensive methods of cultivation and stock-breeding, present productivity could be considerably improved, and present production considerably diversified (flowers, sugar cane, modern stock-breeding and fruits - all products yielding a high return). In short, the market value of the output of the region, according to a report by the World Bank, would rise from 4.4 million dollars to 18.7 million dollars, which would not only raise annual income per family from $75 to $350, but would also bring about the development of agro-business and the setting up of industries for processing agricultural products.

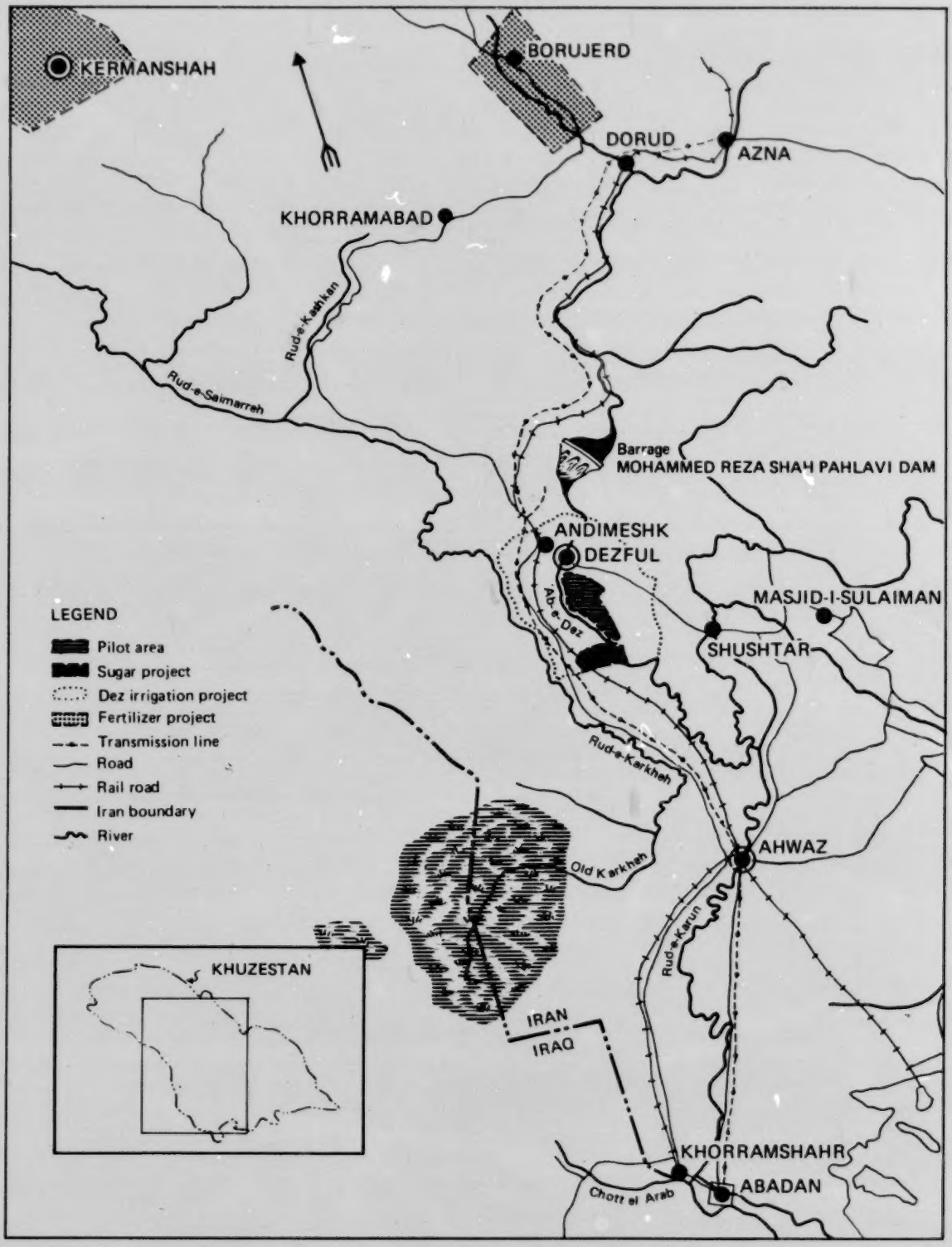
This project also presupposes profound changes among the population of all the region (approximately 100,000). New habits must be learned - for example, how to use the water supplied by the new canal system, consumption of which must be paid

Location of the areas originally selected for the pilot project in Iran

for, and the economical use of electricity. The peasants must be given guidance so that they accept new farming techniques and learn about new crops. As it happens, the extension agents of the body responsible for setting up, co-ordinating and organizing this project (Khuzestan Water and Power Authority: KWPA) are dealing with people who have a particularly low level of education (illiteracy in the region is the highest in Iran: 80-85 per cent), who have lived under a system of land tenure that the "white revolution" hardly changed (the landlords already owned no more than the permitted amount), in particularly unsatisfactory sanitary conditions, and in a very harsh climate. This situation is worrying, especially as attention must be paid, in the very near future, to the gradual training of farm-workers for the agro-business units, drivers and mechanics to operate and maintain agricultural machinery and tractors, and even a labour force for the planned processing industries.

The work-oriented literacy pilot project took in hand 43 villages out of the 58 situated in the 22,000-hectare irrigated pilot area which the KWPA is using as a sector for demonstration and experiment in agricultural development. Of those 43 villages, with a total population of about 10,000, ten were chosen in which it proved possible to achieve a strict balance of theory and practice, because the schools there already had available large enough tracts of land to be used as demonstration fields. The other agricultural development sector is in the region of Pir Bakran, near Esfahan, in the Zayanderud irrigated area which covers approximately 50,000 hectares and in which there are 80 villages with a total population of approximately 40,000. The surface of the area will be doubled after the filling of the Shah Abbas Kadir dam. In this sector, functional literacy teaching is linked with a modernization scheme which aims to improve farming techniques, diversify production, achieve more efficient use of water resources and acquaint the inhabitants with marketing methods.

Among the operational sectors which come under the heading of industrial development in the Esfahan



Operational sectors in the Dezful sub-project

sub-project, the most interesting from the point of view of experiments in functional literacy teaching is the establishment of Iran's first metallurgical complex at Reeze, about 30 kilometres south-west of Esfahan. For the construction of the huge infrastructure required, more than 25,000 workmen, most of them from the rural areas of the region, were taken on. It was therefore necessary to lay on instruction to get them used to a different rhythm of work, allow them to adapt to their new occupational environment (so as to reduce accidents), and to give them some pre-training to make them more capable of using the machines. The management of the project, moreover, supported this scheme by counting time spent in training as working time paid at the normal rate. In addition, it has carefully conformed to the law which requires a 5 per cent wage-rise for those who learn to read. This preliminary vocational training can theoretically be continued in the apprenticeship schools of the complex, which train some of the 8,000 workers that the steel works will need as soon as the first blast-furnace is put into service. It was expected that by 1971, the works would be producing some 750,000 metric tons of cast iron and steel, and this figure should rise to 3 million tons under an extension plan. It can be expected that those who, although they have been trained, do not find work at the steel works itself will be able to go into the satellite industries (cement, gas, petrochemical, asphalt, etc.) which it is intended to install between Reeze and Esfahan, or into the building of the new town of Aryachar, which is to have a total population of 300,000.

6

Agricultural extension activities at Destena, near Esfahan

Esfahan is also a textile centre. A large part of Iran's textile industry is concentrated around this former capital: of a total of 800,000 spindles and 16,000 weaving looms, there are 250,000 spindles and 6,000 looms in the Esfahan mills. Nearly half of the industrial labour force of Esfahan province - approximately 20,000 workers - is employed in this sector. However, almost 60 per cent of these workers are illiterate and their level of training is extremely low. This situation can only be prejudicial to the proper functioning of the factories, the quality of the output and the upkeep and operation of the plant. It is therefore not surprising that cost prices are too high and that the Esfahan textile industry is very uncompetitive. The situation appears all the more serious when we consider that the Iranian Government has decided to take steps to increase capacity by between 10,000 and 20,000 ultra-modern spindles. Esfahan industry is also threatened by a national policy of much greater selectivity in the protection measures it applies, in order to favour those high-quality products which can stand up to the competition on foreign markets. These various measures are causing a serious crisis in the textile industry of the area. Looking beyond the further training of the labour force, consideration must perhaps be given to providing conversion courses, in order to help workers out of a very difficult situation. The introduction of new textile industry equipment will involve considerable redundancy, and those affected will not necessarily find work in related branches of industry.

The third operational sector is that of arts and crafts, of which Esfahan is a famous centre. Unfortunately, statistics on the labour force employed in this sector are somewhat imprecise. They do not take sufficient account of the fact that some part of the work is done at home or during the time that those concerned have off from their principal occupation. Nevertheless, those in charge of the project estimate the number of people engaged in craft production at about 30,000, to which can be added several tens of thousands of workmen who work in repair shops, joiners' workshops, etc. There are other difficulties in this sector. Thus, apparently, a considerable proportion of the working force still consists of children and minors. Furthermore, most of the workshops are on a very small scale, and their potential customers few and far between.

In addition to these industrial sectors proper, there are now two others of increasing importance in the Iranian project. Esfahan is a rapidly growing town. At the time of the 1956 census, it had 254,700 inhabitants; in 1966, there were already 425,000, and it is reckoned that the present population is over half a million. This means, firstly, an influx of people from rural environments who are entirely without preparation for town life or occupational training. On the other hand, in such a young population, there are more and more adolescents and young adults who start out in life without finding a place in productive employment, not having received adequate schooling or any vocational training. In response to this new, admittedly somewhat ill-defined demand for vocational pre-training, an industrial pre-apprenticeship sector has had to be planned in the rural region of Pir Bakran, next to the area where the metallurgical complex is being set up.

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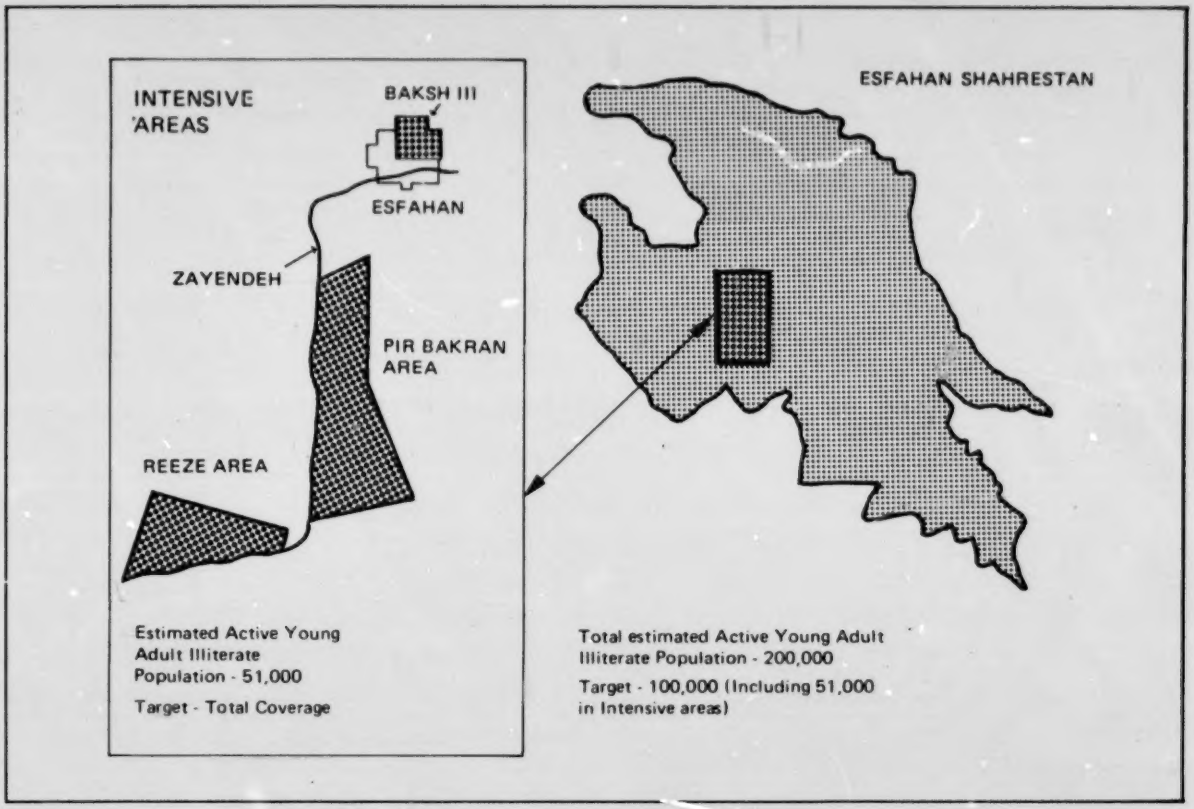


Operational sectors in Esfahan sub-project

Other specific work has been undertaken, not in connexion with any particular sector of economic activity, but in response to the needs of a social group which is especially isolated in Iranian society: women. Women in Iran merit special attention, owing to the segregation from which they still suffer, more particularly in the humbler ranks of Iranian society. Such segregation limits their development, both at the stage of schooling and in the matter of employment. Thus in the textile industry less than 10 per cent of the workers are women. Any campaign based purely and simply on vocational training would only make this section of society even more of a marginal group; incidentally, we know what an important part it plays in promoting or hampering any policy for social progress, for the improvement of family life and, above all, for the vocational guidance of the young.

Table 5. Craftsmen's workshops by numbers of workers employed

Number of workers	Number of workshops	% of total
Under 5	14 248	89
5 to 9	1 353	8
over 10	308	3

NON-EDUCATIONAL PREREQUISITES OF FUNCTIONAL LITERACY WORK

So far in looking at the relationship between the frame of reference and functional literacy work we have employed a single approach, which we might call "centripetal". The working hypothesis is that once the socio-occupational framework has been adequately defined, it is possible to deduce from it the fundamental components necessary to programme the teaching work on a strict basis. This approach, as we shall see in the next chapter, exactly matches the methodological approach by which the Iranian project works out the programme in question. Now, it is certain that education thus defined is a response to demand; however, that does not mean that the training supplied is then going to be accepted and recognized, or, more particularly, that it is going to be integrated. In

other words, if functional literacy teaching is to be effective, i. e., if the improvement in training which it brings with it is to be recognized as such, a number of non-educational requirements must be fulfilled. It is perhaps no exaggeration to say that the functional character of the training establishes a social contract between educators, workers and employers, which forces the socio-occupational environment also to alter, reorganize itself and even change completely. Without claiming to treat this question fully - it is one of the most important raised by functional literacy - we would like to indicate at least four points on which the Iranian Project has come to make requirements of that environment which it was supposed simply to serve.

First of all, the problem of educational premises. Of course, in theory, the place of work should itself be the place of study. Such integration is probably possible in a small craftsman's workshop (see illustration No. 8); but in a larger firm, it is seen to be impracticable. Sometimes, as in spinning mills, noise is the factor which prevents communication. On other occasions, the space is so cluttered with machinery that it is quite impossible to gather a group together. Most important, however, the simplest teaching aids, the simultaneous learning of writing and reading, writing exercises, etc., assume that there is a place where, if only for a moment, one can sit down, use tables or have a proper support to write on. It happens that the only place available in most firms is the canteen - and one disadvantage of this is that, to start with, it means training must be done in leisure time. At worst, there are badly lit premises, arranged in the stereotyped school-room way - benches or lines of chairs facing a blackboard. Another problem that can arise concerns the space available for individual work - absolutely none in the Esfahan working man's environment.

This last aspect brings us to the second vital point: the synchronization of training time and working time. This has been made easier in the metallurgical complex by including training time in normal working hours. In the rural development sectors, it was possible to fit the training programmes in with the agricultural calendar by holding courses in cycles of a few months each year, and dividing them into functional units which were relatively independent of each other. For instance, in the plant protection programme, the specialists even drew up a calendar of plant diseases, and used it to achieve the maximum possible synchronization in this subject, in which the conditions are not imposed by man, but by a much more capricious Nature. The worst muddle, however, was the man-made muddle which reigned in the textile sector. Textile firms work continously in three shifts (2 to 10 p. m., 10 p. m. to 6 a. m. and 6 a. m. to 2 p. m.). Not only do workers regularly change shifts, but they are always in a hurry to leave the factory. Indeed, they sometimes live so far away from their place of work that if they missed the firm's bus, they would lose many hours: and to many, if not most, of them time is particularly precious because they spend a few extra hours each day at another job to supplement their exceptionally low wages. For this reason, functional literacy classes could be held only from 6 - 7 a. m. and 1 - 3 p. m., each session lasting one hour, five times a week. Workers on one of the shifts cannot therefore attend the course.

8

Combining learning and working space in a craftsmen's workshop

This vital question of the timetable brings us to the third problem, which relates to the fact that teaching work, according to the functional literacy concept, directly challenges working conditions as a whole, i. e., the management of the enterprise. Despite the insistence of the Government and instructions from H. I. M. the Shahinshah that workers' participation be increased, management has remained very autocratic or, at best, bureaucratic. In some sectors which had enjoyed the benefits of a protectionist policy - as had the textile sector, in fact - the absence of any stimulus from competition was causing real apathy, whilst plant and machinery were aging. So it is not surprising that the management reacted with more than indifference to having what to them could only seem to be subversive elements invading the shop floor. Those who learn to read are not even given a bonus, despite the fact that the law stipulates a 5 per cent wage-rise for workers who pass their examinations (85 per cent). It is considered highly undesirable to promote them within the firm, and this causes conflicts, as in the case of the worker who, having asked a technical question of his foreman and received no reply, told him the answer which he had recently learned in the functional literacy class and then walked out of the factory, declaring that he could no longer take orders from an ignoramus. In such a situation, it is obvious that to provide training for workers alone will only increase the irritating imbalances between the various occupational groups. It is absolutely essential to re-train, if not simply to train, foremen and charge-hands as well as, and at the same time as, the workers,

to win over the middle-level personnel, who often show considerable cultural resistance towards the world of their subordinates, and in particular to take steps to put management in the picture. Such activities, considered as a whole, although they certainly go beyond the limits of the pilot project, could nevertheless find a place in that project, provided it starts out from a specific problem (for instance, the preparation of standardized technical vocabulary in Persian, which could play a very important part in the integration of language into technical training).

We now come to the fourth point we wish to mention: to what extent can those in charge of functional literacy teaching and the directors of modernization projects be sure that it is possible to bring about changes, for example among peasants quickly and profoundly enough for them really to be able to take an active part in the implementation of those projects within the allotted time?

This is a difficult question, but one that is basic to the continuity of training. This is proved by the crisis which arose at the Dezful sub-project in November 1969, when the KWPA decided to transfer more than half the irrigated area involved, some 13,000 hectares, to agro-business. This decision deprived some villages of any hope of cultivating their own irrigated land, and reduced the scope of the pilot project to 31 villages with 9,000 hectares, to which were later added 11 other villages that have not yet been linked to the irrigation network. Apparently this was not due to any animosity on the part of the KWPA towards the pilot project, but to two fundamental divergencies: one concerning quick returns on the considerable capital invested in the building of the dam and the creation of the irrigation network; the other relating to the potential of the region's human resources. To the KWPA economists, the peasants' standard of living has been so low for so long and their cultural horizon is so limited that they are steeped in ignorance and apathy. The KWPA technicians no longer believe that change can come rapidly, and this results in an impatience which expresses itself in a distinctly authoritarian attitude towards most peasants - an attitude which conflicts with the essentially educational nature of the pilot project work. The irrigated land is alotted by the KWPA for a limited time; they lay down without consultation the type of farming and the techniques to be used. In short, the KWPA technicians behave as if their only object was to attain high productivity regardless of the means. Probably they would admit that a select minority of peasants could be employed in the agro-business units as farm workers. There they would not only learn new techniques, but could save up capital from their wages to invest in their own land. The actual effect of this would be an alliance between big business and a peasant élite, and indeed such an alliance could indubitably be the means of achieving the economic targets envisaged, but only at the price of the majority of the peasants at present living in the region becoming a marginal group.

THE LOGISTICS OF FUNCTIONAL LITERACY TEACHING IN THE IRANIAN PROJECT

To put into operation a project comprising so many factors, some of them unknown, caused some uncertainty about the work plan. Although the request to UNDP suggested a total duration of four and a half years, this was cut to four years in the Plan of Operations, and was finally extended to five years in the draft amendment.

Similarly, the order of the various stages has been radically altered. In the request, it was recommended that implementation of the project should begin between March and June 1966. After a six-month preparation period, two two-year literacy teaching cycles were planned. Each of these periods was to be used to train a group of national specialists. The request was thus based on the assumption that there would be no difficulty in working out the methodology.

The Plan of Operations lengthened the preparation period to one whole year (1967). After a single operational period of two years during which the methodology was to be put to the test, it allowed one year for the evaluation and preparation of the extension of the project.

The draft amendment to the Plan of Operations takes into account the lessons learnt from past experience. After three years of research (December 1966 - September 1969), the project works out a methodology which is systematically applied to 19 programmes over a period of one year. From September 1970 to the end of the project, the programmes are to be extended both to the Dezful district, with a population of about 190,000, and to Esfahan province, with a population of about one and a half million. The latter modification will doubtless involve a radical alteration in the budget, which under the Plan of Operations was to have been $2,880,346 supplied partly by UNDP ($1,356,000) and partly by the Iranian Government ($1,532,000).

A functional literacy project, furthermore, has special organizational requirements. Although it is purely and simply an educational campaign which, as such, comes under the educational authorities, depending on its specific orientation it will also require the participation of various ministries and of the many institutions for literacy teaching or adult education which, as we have seen, are on an especially large scale in Iran. In the request, the delicate problem of inter-ministerial co-operation was solved by putting the administration of the project under the direct responsibility of the Prime Minister. Since the request envisaged three almost equidistant projects, the centre of the operation was naturally located in Teheran. The request also envisaged close links between the Teheran University Institute of Social Research, working under contract, and the Plan Organization.

Both the Plan of Operations and its 1970 amendment opted for a completely different administrative approach, placing the project, which has financial and administrative autonomy, under the authority of the Ministry of Education. This solution made it possible for the Iranian government employees seconded to the project, the instructors responsible for the literacy courses and the training officers for the training of those instructors to be chosen from the employees of the Ministry and for their salaries to be paid by the latter. Even though the project undertook responsibility for payments supplementary to salaries, this device made it possible to increase considerably the resources earmarked for the project by the Iranian Government. There remained the problem of inter-ministerial co-operation and co-ordination. For the first three years, the Ministry of Education was to organize a Consultative Co-ordinating Committee, which was to meet at least once every three months. This institutionalized co-ordination did not come up to expectations, and in April 1970 the Prime Minister decided to set up an Inter-ministerial Co-ordinating Committee, under the chairmanship of the Deputy Prime Minister with responsibility for economic affairs. The Committee consisted of representatives of the Plan Organization, the Ministry of Science and Higher Education, the Ministry of National Education, the Ministry of Culture and the Arts, the Ministry of Economic Affairs, the Ministry of Labour and Social Affairs, the Ministry of Agriculture, the Ministry for Agrarian Reform and Co-operatives, the Ministry of Industry, the Ministry of Public Health, and the Ministry of Information.

This inter-ministerial committee is specifically responsible for:

making recommendations on the means whereby the implementation of the project is to be linked to the aims of the National Development Plan;

co-ordinating the work of the departments and authorities concerned with workers' training and the activities undertaken under the project;

defining the part to be played by functional literacy teaching in the drive to make full use of human resources with a view to the reform of education, which constitutes one of the basic items in the "white revolution".

Lastly, the cancellation of the third sub-project radically altered the part to be played by the administration headquarters, which has since been responsible mainly for contacts with the government authorities and with the other United Nations agencies. One of the results of this administrative readjustment was to lay more and more stress on the Esfahan sub-project, which has indeed become the intellectual focal point of the whole Iranian project.

Chapter III

The development of a methodology

"When the Teheran Conference ended, I was sure of only one thing: literacy teaching cannot be an end in itself, but must serve other ends. That was all."

Dr. Birjandi

AN EDUCATIONAL LONG MARCH

The brief operational history of the Iranian Project would be an opportune reminder, if any were needed, of the fact that innovation in teaching is neither an easy nor a rapid process. Doubtless the principles of the Teheran Conference, and more particularly the educational implications of those principles, had been and still are presented in terms of thesis and antithesis, with each innovation of functional literacy teaching contrasted with some fault in the traditional type of literacy teaching. But doing the opposite of something that was wrong is not the same as doing something right. In addition, such an approach tells us nothing about the resources to be brought to bear or the path to be followed.

The experimental nature of the programme of which the Iranian project is part might have justified a cautious approach: a pause for reflexion might first of all have made it possible to carry out basic studies to determine which sectors might best be tackled, to analyse training requirements, to seek adequate methods for translating those requirements into targets, to organize the methodology of training, to make a start on briefing and training the instructors, and then and only then to start classes. This would have been an acknowledgment that functional literacy presupposes a far longer phase of research, preparation and briefing than that provided in traditional literacy teaching, where the purpose is only to translate, adapt or on occasion write a primer or a single textbook. It would also have meant delaying demonstrative action. However, although such an approach might be possible in a region or country where there has been little educational activity, it would have been very difficult in Iran where, as we have seen, there has long been a sustained will to action in the spheres of literacy and adult education.

In December 1966, even before the Plan of Operations had finally been signed,(1) the pilot project was operating literacy classes which continued unchanged until April 1967. This involved 700 classes of which neither the aims nor the methods corresponded in the least with those of the experiment in prospect.

Once the handicap of this false start had been overcome, the project got itself organized. At Esfahan in July 1967, a plan of action for the four remaining years was worked out, with three programmes for three distinct but heterogeneous groups of adult learners:

a home economics programme for housewives, with a view to improving the status of women;
an industrial vocational pre-training programme (i. e. literacy teaching plus general introduction to industrial life);
a general agriculture programme.

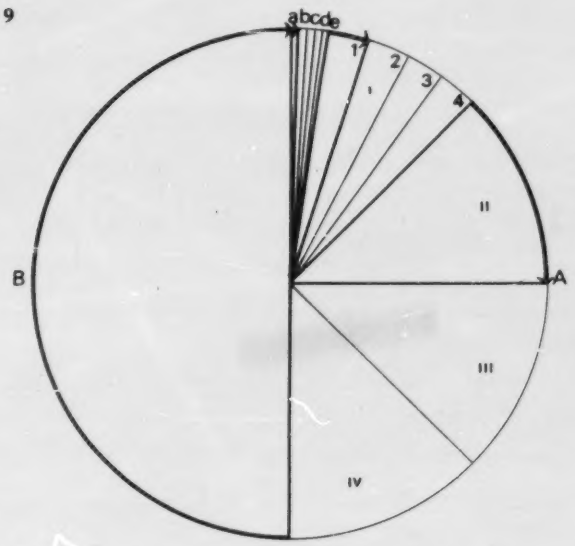
These were still very general programmes but by working them out it was possible to see what problems would be raised by the more specific methodology of functional literacy teaching. The process also served to give both Iranian specialists and instructors the feel of the new approach - until then they had been doing literacy teaching on entirely different lines. This stage did not go beyond the somewhat vague and traditional framework, as formulated in the 1966 Iranian request and the 1967

1. It was signed in January 1967.

Plan of Operations. In all three programmes, the aim was to make the knowledge acquired through literacy teaching more useful and more effective, by adding an "extra-something" which is hard to define.

A new step forward was taken in January 1968, when the project educators planned and organized micro-experiments in precise situations, the nature of which was generally defined by their setting within a particular enterprise, for homogeneous socio-occupational groups of adult workers. Several of these experiments came to a premature end as a result of the teachers' inability to cope, the difficult working conditions, and the fact that workers had not enough time available. Two of the experiments, however - one of them in a modern Esfahan textile mill, the Taj factory, and the other in Dezful - were successfully completed, and this enabled the project specialists to draw some very important educational conclusions.

Critical reflexion on these experiments - even though they could not be submitted to as strict an evaluation as might have been desired - was a source of creative inspiration. The various sectors of the pilot project, whilst using the same methodology, drew up a number of programmes specifically planned in relation to certain occupational activities. From September 1969 onwards, the Iranian project introduced a much wider range of differentiated programmes (four at Dezful and 12 at Esfahan)



The basic elements of the functional training system

a, b, c, d, e . . .	:	working session
1, 2, 3, 4 . . .	:	sequence
I, II, III, IV . . .	:	functional set
A, B	:	training cycle
A + B	:	training programme

alongside the general programmes which themselves were re-oriented to take certain objectives of social development into account (hygiene, nutrition, family planning, etc.). In addition, the sub-projects were reorganized so as to take more account of the common methodology. In the case of Esfahan, this occurred in October 1969, in that of Dezful in 1970. Now the pilot project as a whole is using a single methodology as a basis of reference, while experimenting on a limited scale with other methods for purposes of comparison. Thus it took more than three years for the Iranian project to develop its own methodology, and almost four years to become fully aware of it. One of the results of this latter stage was that in November 1970 a draft amendment to the Plan of Operations was prepared: this was the first official document to refer explicitly to the methodology of the Iranian project, and it also gave a brief definition of that methodology. We shall now try to describe it here[1].

A CONTINUOUS STRATEGY OF TRAINING

If functional literacy teaching is to be the point of departure for a continuous training process - and particularly one of self-training - for adults whose world has been altered by the impact of economic growth, social change or political events, it is necessary to fit this first stage of training into a whole context which is defined by cultural development; the aim must be, in the words of J. Dumazedier, to develop to the full the intellectual and symbolic resources of all the people in a given society, so that they become the responsible and conscious agents of overall development. Indeed, it is a matter of developing not only cognitive attitudes, but also the capacity to invent and to decipher symbols and signs, the great importance of which we are rediscovering with McLuhan.

This is a long-term aim. Perhaps it will need a generation, perhaps more, for such cultural development to become irreversible. This also

1. This description is the author's digest of various reports, his own observations in the field, and, more especially, his long conversations with the man who was the moving spirit behind this work, Dr. Camilo Bonanni. While the author thought it essential to try to describe the methodology in question in order to show the richness and diversity of the educational contribution made by the Iranian project, he does not claim to go into all the details nor to answer all the questions or all the objections which might occur to the reader. For further details and more precise information, readers are invited to consult either the reports quoted in Annex III, or the writings of Dr. C. Bonanni which are now in course of publication.

means that training will not be continuous, but will perhaps take the form of a series of "cycles", each corresponding to a new project, or to a new stage in the development of a project, e. g. , work on the infrastructure (railways, roads, dams, etc.) will be followed by the actual assembly of a steel works, the commissioning of the works, the construction of a workers' housing estate, the installation of light and medium industry, etc. There might be one or two training cycles corresponding to each of these separate objectives, each cycle lasting between six and eight months (so that in rural areas the training periods would not clash with seasons of intensive agricultural work). So far the pilot project has envisaged at most two training cycles per programme.

Each cycle comprises between five and seven "functional sets" the content of which must be such as to help towards the elimination of some obstacle or hindrance to the achievement of the objectives aimed for by the training cycles. The functional set may be spread over one or two months, according to the problem to be solved.

Each of the different components of the solution of the problem to be treated is the subject of a "sequence" which constitutes the basic functional unit. In theory, a sequence corresponds to one week (six daily sessions of two hours at Dezful; five sessions of one and a half hours at Esfahan). Sometimes, depending on the content, the working sequence may comprise ten sessions, i. e. two weeks; when general problems are being dealt with,

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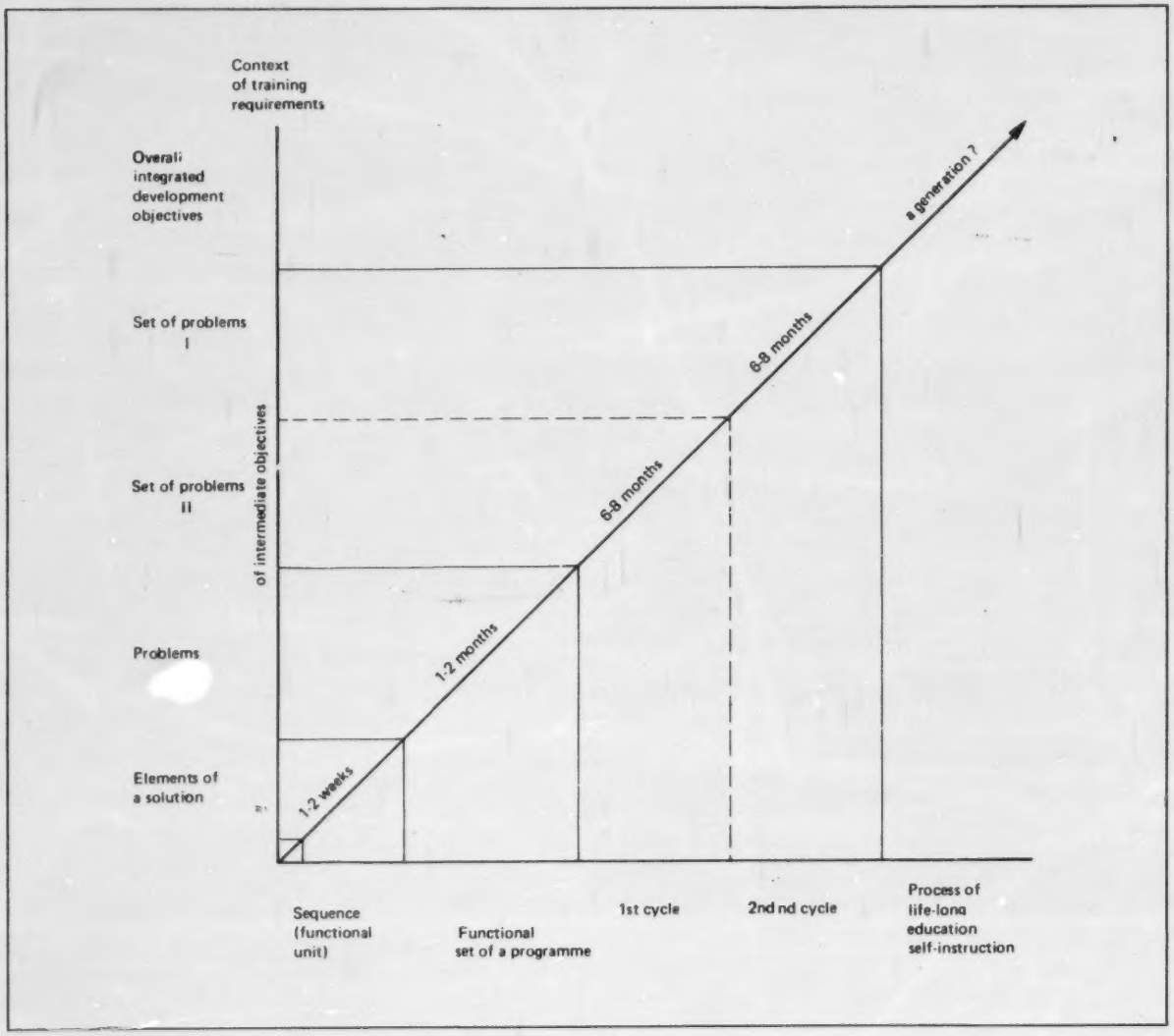

Diagrammatic representation of continuous functional training

it may be spread over as much as a month.

The learning, then, can be organized on the basis of these functional units, particularly when adults have been adequately prepared and have acquired certain habits of individual intellectual work and the teaching material has been fully worked out. The present Chief Technical Adviser of the pilot project, Mr. Pierre Henquet, has even considered setting up a "sequence bank", from which groups or even individuals could draw the basic elements required for programme self-instruction. The duration of training can be estimated approximately as follows:

Table 6. Estimated length of training

1 daily session = 2 hrs. in Dezful 1½ in Esfahan			
1 sequence = 5 to 10 sessions	10-20 hrs. in Dezful 8-15 hrs. in Esfahan		
1 functional set = 4 to 6 sequences	= 20 to 60 sessions	40-120 hrs. in Dezful 60-90 hrs. in Esfahan	
1 cycle = 5 to 7 functional sets	= 20-42 sequences	= 100-420 sessions	200-840 hrs. in Dezful 150-630 hrs. in Esfahan

DETERMINING THE REQUIREMENTS AND PROGRAMMING THE TRAINING

In theory, literacy teaching, if it is to be functional, i. e. tailored to meet the difficulties which illiterates have to overcome, presupposes a detailed, probing study of the environment which has been chosen as the sector of operations.

According to the Plan of Operations this first phase of the Iranian project should be under the control of the evaluation group, since that group was to have done a "baseline survey", diagnosing each area involved. But innumerable difficulties arose. In the first place, the development objectives had been defined only at the national level, and as a result, when they were transposed to the regional or local level, not only did they become very vague, but there was no non-central planning body in charge of them. The outcome was that no organization would take direct responsibility for them. Then, as we have seen, since the development of human resources had never been the subject of detailed studies or of decisions preparatory to a long-term policy, there were not even any statistics at the local level from which to calculate exactly how many workers there were in each sector. Some particular projects either had no explicit employment policy or were apt to switch policy abruptly without taking into consideration the repercussions on the planning of training. In addition to these uncertainties, there were difficulties which arose within a team whose members, whether Iranian or international, had never before done work of this type and did not even know the methodological processes involved. Finally, it became more and more obvious that any programming based solely on a list of the requirements within a particular enterprise would be of only limited significance, since it would be difficult, at such a level, to distinguish between permanent and occasional, temporary or even purely contingent needs. All these reasons explain why, for the first three years of the project, there was so little diversification of the training and why, in short, it was not very functional at all.

It was agreed that, in order to get out of this stalemate, a range of specific programmes should be established, the operational sectors being distinguished in accordance with an economic typology devised in relation to the intermediate development

objectives of the pilot project areas, as they could reasonably be deduced from the overall objectives of the third and fourth National Plans. In each of the sectors it looked possible to identify socio-occupational groups that were sufficiently uniform with regard to their working situation as to have common training requirements and large enough to make viable teams. Once these groups were formed, it would be possible to work out models which could subsequently be applied to other groups which emerged in the course of development and of contact with economic reality.

For the last two years of the pilot project, 15 specific programmes were thus selected and organized right down to the details of every sequence.

Parallel to this movement towards diversification, which made it possible to bring literacy teaching into an increasingly close relationship with specific vocational training, and the details of its programming into closer relationship with various actual situations, it was felt necessary, nevertheless, to keep some so-called "general" programmes in the Iranian project. Using this approach, the sectors of operation were selected on the basis of a socio-economic typology which showed there was an urgent need for the social advancement of a group which was obviously much more heterogeneous than in the specific programmes. Although these programmes did not strictly fit in with functional criteria, they had the advantage of bridging the gap between functional literacy and traditional literacy teaching and adult education campaigns in Iran. These general programmes take into account the existence and objectives of a number of Iranian institutions concerned with literacy teaching, and whose work could be more efficient if, within it, literacy teaching was associated with other techniques. This is true, for instance, of the National Women's Organization (literacy teaching for women and improvement of their status; literacy teaching with home economics, literacy teaching with vocational pre-training), the Department of Agricultural Extension of the Ministry of Agriculture (literacy teaching and extension work) etc. Such programmes keep to the educational principles of functional literacy teaching, so as gradually to give officials and instructors who have not yet had any practice in the methodology of functional literacy teaching the feel of the work.

In the course of this first stage, the Iranian project succeeded in establishing the framework for its operations and deciding what target populations to aim for. From that framework, it will be able to deduce a number of requirements generated by the dynamic of the development project, and of requests which might be formulated by employers and officials of the firm and which will be supplemented by suggestions from specialists in vocational training or further training. From the type of target population, on the other hand, the project will be able to arrive, by inductive reasoning, at a knowledge of the problems that face the adult pupils admitted to the project courses. It will also be useful to put more detailed questions to the members of the target populations to find out their aspirations and motivations. This double-purpose inquiry into the needs and hopes of those involved is also important for collecting information about what the people concerned already know, particularly when they have had no chance to show it. These two sides to the problem - needs and hopes - must finally be looked at while keeping in mind the continuous strategy on which the team responsible for educational action bases its work. In conclusion, given the requirements implicit in the objectives, and keeping in mind the needs to be met and the resources at present available, it should be possible to work out what new contribution training should bring about.

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A group of women taking part in one of the general programmes

As a result of this frequently arduous work of appraisal, the pilot project's interdisciplinary team is able to identify, define and analyse a series of problems which are the expression, in educational terms, of the main obstacles likely to arise in the course of a development project and to prevent the achievement of its objectives. A difficult task must then be performed: of these problems, the educators must single out those and only those which depend essentially for their solution on educational action. These are then arranged into a system, i. e. a coherent set of hypothetical relationships between clearly defined elements. In this way, the basic materials for framing a training programme are brought together. Each training programme comprises two cycles. Each training cycle is focused upon a series of problems arranged according to an internal logic. For each problem there is a corresponding "functional set" comprising a series of sequences, each of which is designed to find an effective solution to one of the elements of the problem.

Table 7. The specific programmes

Sector	Programme title	Objectives	Sub-project	Outside support from :
PRIMARY SECTOR	1. Plant protection	Improvement of productivity	Esfahan	Karidj Faculty of Agronomy and Evans Institute
	2. Sugar beet	Double yield and increase sugar content	Esfahan	Engineers from the Esfahan sugar factory and Karidj Faculty of Agronomy
	3. Irrigation techniques	Better use of water	Esfahan	Ministry of Water and Kabutinbad Agricultural College
	4. Elementary agricultural mechanization	Training farm workers	Esfahan	Ministry of Agriculture Institute for Agricultural Mechanization
	5. Market gardening	Improvement of tools	Dezful	KWPA experimental farm
	6. Stockbreeding	Improvement of fodder	Dezful	KWPA experimental farm ; Hayderabad Stock-breeding Centre ; and Razi Animal Disease Institute
	7. Horticulture	Introduction of fruit and flower growing	Dezful	
	8. Mines	Vocational training for miners	Esfahan	Engineers from the zinc mine and the Teheran Polytechnic Institute
SECONDARY SECTOR	9. Agricultural mechanics	Preparation for employment in agro-business	Dezful	KWPA maintenance workshop
	10. Automobile mechanics	Maintenance of mobile construction plant	Esfahan	Reeze complex mechanical workshop
	11. Building trades	Improvement of construction techniques	Esfahan	Technical school, Esfahan steel-works
	12. Iron and steel industry	Training future workers	Esfahan	Reeze complex technical school
	13. Textile industry	Familiarization with materials and techniques	Esfahan	Ministry of Economics, Textile Department
TERTIARY SECTOR	14. Embroidery	Economic advancement of women	Esfahan	Embroidery craft co-operative
	15. Craftsmanship in non-precious metals	Creation of a model training programme for craftsmen	Esfahan	Division of Crafts

Table 8. The general programmes

Title of programme	Target population	Objective	Sub-project
Vocational pre-training	Adolescents not enrolled in school and out of work	To facilitate the adaptation of young people from rural areas to industrial environments	Esfahan
Women's education	Workers' wives	Advancement of women in the fields of nutrition, health and birth control; model for the "sepahis" of the Hygiene Corps	Esfahan/Dezful
Civics and social integration	Workers without steady employment and men in villages in which no specific programmes exist	Introduction to modern urban life	Esfahan
General agriculture	Farmers in regions where no special development project exists	Improvement of productivity model for the "sepahis" Literacy Corps	Esfahan

THE INTEGRATED APPROACH

The programming of education in terms of needs entails the diversification of the forms of educational action, the effect of which is to make training programmes increasingly specific. Since the aim is, ultimately, to make individuals responsible for and capable of training themselves to meet the requirements of the situation in which they operate, there is strictly speaking no limit to diversification - the final result of which would be to do away with all collective training institutions. The Iranian project does not, however, go to this extreme. Its methodology also serves to unify the different programmes, in so far as these are based on a common structure. This aspect is already manifest in the linking and intermeshing of the various elements which, starting from the sequence, lead on successively to the training cycles. This unification is not characteristic only of the organization of training; it also reflects a shared conception of the learning process which emerges clearly at the level of the basic unit of instruction, the sequence.

This shared conception of learning can be reduced to three basic principles:

whatever the length and position of a sequence, all operations which are considered as being crucial to the individual's development must of necessity be included in it;

the operations must, irrespective of the relative weight given to each one and the specific content of a sequence, form a coherent series, the logic of which is consonant with that presumed to govern the adult's learning process;

at whatever point in the sequence, i. e. in whatever session of that sequence, the different operations must always relate to an overall learning pattern - a requirement which pre-supposes a very high degree of integration of the items of knowledge.

Whether the sequences are merely formal units of instruction or whether they are an element of crucial importance in the learning process depends on the extent to which these principles are applied in their programming.

Each sequence does, in fact, bring into play all the basic elements involved in the development of the adult's personality, obliging him, within a short span of time, to go over all the different aspects of a given subject and highlighting the interrelations between the different aspects of knowledge.

What, then, are the operations which the Iranian project, at the present stage of its methodological development, has selected as basic? They are seven in number:

1. the theoretical and practical study of the techniques, working tools and, where appropriate, the models required for the proposed vocational in-service training;

2. improvement of students' knowledge as required for purposes of communication, in which operation literacy work will, at least initially, play a central part; this involves both enhancing the

Table 9. Time-table of a training cycle

Functional sets		Sequences	Daily session		
Problems to be solved	Central theme		Technical element	Basic operation	
To decrease the frequency of avoidable breakdown of plant and equipment. To achieve the more economic use of consumable materials. To decrease the rate of absenteeism and employment fluctuation. To decrease the accident rate and time off for injuries. To increase productivity by better utilization of time and by better co-operative efforts and team work.	The cooling system its maintenance and common faults	1. Introduction to the cooling system	Registration session		
			Registration session		
			Purpose and simple functioning of the cooling system	Tech.	
			Radiation	Scie.	LANG.
			Engine block	Draw	
			Volume units	Calc.	
			Responsibility	Soci.	
		2. Leakage in the cooling system	Leakage points & causes & prevention	Tech.	
			Convection currents	Scie.	LANG.
			Radiator	Draw	
			Bolt-tightening order	Calc.	
			Treatment of burns	Soci.	
		3. Thermostat - its functions and possible faults	Function of thermostat	Tech.	
			Expansion and contraction	Scie.	LANG.
			Thermostat	Draw	
			Temperature scale	Calc.	
			Temperature - general	Soci.	
		4. Seasonal servicing of the cooling system	Flushing system and use of antifreeze	Tech.	
			Freezing & boiling	Scie.	LANG.
			Fan	Draw	
			Simple proporation	Calc.	
			Planning	Soci.	

quality of the spoken language and giving training to decipher technical documents (graphs, technical diagrams, etc.);

3. an introduction to elementary mathematics and training in the processes and terms needed in quantification;

4. "scientific acculturation", i. e. a grounding in chemistry, physics and biology, all useful in the solving of technical problems;

5. an introduction to the process of symbolization, which starts with a ground in graphic representation and should lead on to training in conceptualization;

6. a grounding in socio-economic analysis, to enable adults to distinguish other than purely occupational factors in the definition and solution of technical problems and to learn to take account of them in the limited context of the job situation;

7. lastly, the extension of the operation into the social and cultural spheres, the aim being to move beyond the job situation in order to apply the methods and, where appropriate, solutions already devised to other situations.

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The integrated approach in the Taj factory micro-experiment

We must now examine in detail the progression planned by the educators from one of these operations to another in order to establish a proper sequence of operations - that is, a coherent series which takes account of the adult psychology of learning.

All sequences begin by a group discussion, serving to clarify the subject-matter, taking into consideration the previous experience of the members of the group. It is in fact essential to establish as soon as possible how much the group knows, in order to avoid all superfluous repetitions and to make maximum use of what has already been learnt. The instructor thereby avoids giving the impression that such previous experience is of little importance. These initial discussions also enable the instructor to identify any mental conceptions which are likely to hamper the transition from the technical demonstration to the process of quantification and, subsequently, to the scientific interpretation of the phenomena observed.

Once the group has been motivated and, consequently, consolidated, its attention must be held and concentrated either by a "live" demonstration or by exercises or again by means of a visual representation of the proposed technical solution. This can equally well take the form of learning a gesture or manual operation, gaining familiarity with an apparatus or mastering a technique, etc. This purely visual and oral activity also provides an opportunity to develop students' communication skills. Everything can serve this purpose: the learning of new technical terms, the definition of concepts, the formulation of working rules or the study of a diagram. This may be illustrated by an example taken from the first training cycle, devoted to the repair and maintenance of vehicles. Once attention has been focused by the group discussion on the problem of the over-heating and cooling of the motor and the function of the thermostat having been perceived, the group must learn to identify the thermostat and to understand the mechanical principles of expansion and contraction by which it works. To take another example, in the spinning department of the Taj mill, the various blends of yarn are specified by number and name, and in order that a specific production batch be reproduced correctly, the specifications must be adhered to faithfully. In order, therefore, to teach the spinners something more than mechanical skills, instruction in colour names, the factory colour code, and the yarn mix codes must be given. The progression of words or letters cannot be dependent upon formal laws relating to the learning of the alphabet, building of syllables, and so forth.

The next stage is to elucidate the rules which were used in order to distinguish their scientific implications. In our first example, the thermostat serves as an introduction to physics and, more particularly, to concepts relating to temperature and to its measurement. The mathematical concept directly involved is that of the scale.

This leads on to the central stage, namely, to the sessions in which sentences are built up using terms related to the subject which have already been introduced during previous sessions. This

consolidation of the students' knowledge will be backed up both by the representation of the problem and its solutions in diagram form and by an introduction to the different processes involved in the written language.

During the following session, the group is introduced, firstly, to the study of the complex process by which a problem and its solutions are governed by other factors and, secondly, to the extension of the learning process to fields which lie beyond the group's working horizons. In the first example chosen, the session is built around the theme of the temperature of the human body, which is developed in its applications to health control, the way in which conditions of life are affected by it, and so forth. Reference is also made where possible - and when there is time - to industrial accidents, in particular to those involving burns.

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From analysis of a problem to the practical demonstration of its solution

The final sessions of the sequence are devoted to revision and consolidation (where necessary, by means of semi-programmed exercises) and to carrying out a first assessment of the work done by the group. Behind this strictly educational assessment, however, there lies the concern to return to practical matters - for example, to workshop activities or to practical application of the technical skills acquired by the group. The group is prompted to draw the immediate, practical lessons from the sequence. The instructor may, where necessary, get the group to establish a simple plan of operations to be carried out. The final session is thus already, in a way, the first stage in transcending an artificially created educational situation, and a first step towards constant improvement of skills in the actual job situation.

We have been able so far to determine how much ground the sequence is designed to cover, operation by operation, and to outline the order in which the operations are arranged.

It remains for us to consider the phasing of the learning process in each session. This requires particularly careful handling, as a balance must be struck in the relative weight given to the various elements of each operation which takes account of the difficulties of assimilation - by no means always foreseeable - experienced by students. In each session, particular importance must be given to one particular operation, while ensuring that it ties in with the others. In order to simplify this task and to provide instructors with an adequately clear-cut plan of operations, the time-table of work for the Iranian project was organized according to the following classification:

I. Technical instruction
II. Language
III. Calculation
IV. Science
V. Technical drawing
VI. Socio-economy
VII. Socio-cultural extension

It should be stressed that this classification does not re-introduce the "disciplines", "branches" and "subjects" so favoured in traditional schooling. The different items do not correspond to a breakdown of programme content; they serve simply to specify the time which the working group should on average devote to each operation during each session.

Until now, we have considered only the first two methodological principles; there remains the third, namely, the integration of knowledge. This principle entails two requirements. Firstly, the methodology of functional literacy work must reflect the repercussions which the different branches of knowledge all have on each other. Secondly, it calls for the integration of all the elements involved in training in a unified learning process which gives special weight to vocational training. We shall consider the consequences drawn by the Iranian project from these requirements with reference to three particularly important aspects:

the integration of language learning and technical training;
the integration of mathematics and technology;
the integration of technical drawing and technical programme content.

With regard to the integration of language learning and technical training, the first stage is to assess and analyse the understanding shown by the group of the technical terms and concepts which they use, in order to familiarize them with a more precise and better articulated technical vocabulary. It should be recalled that this language learning goes beyond the linguistic effort proper, extending to the logical structures of adult thought. It constantly transcends the strictly literary aspects, rising to the level of the language of symbols.

In the second stage, what is considered to be the key element of the sequence is always linked with a poster, the significance of which is expressed in a corresponding sentence. This sentence is recopied and learnt as a unit. During the third stage, it is broken down into its constituent words, syllables,

Table 10. Timetable of three sequences included in the first training cycle : "Maintenance and repair of vehicles"

SEQUENCE 2	Day one		Day two		Day three	
	Revision of previous sequence	Tech. 20 min. Calc. 20 min. Lang. 40 min.	Tech. 50 min. Soci. 15 min. Lang. 55 min.		Calc. 40 min. Draw. 40 min. Scie. 20 min. Lang. 20 min.	
SEQUENCE 12	Day one		Day two		Day three	
	Revision Introduction new topic What group knows Implementation group plan. Tech. Inst.	15 min. 20 min. 20 min. 20 min. 45 min.	Calc. 30 min. Scie. 60 min. Lang. 30 min.		Tech. 30 min. Calc. 20 min. Draw. 20 min. Soci. 30 min. Lang. 20 min.	
SEQUENCE 22	Day one		Day two		Day three	
	Revision New topic Group knowledge Implementation Tech. Inst.	35 min. 10 min. 15 min. 10 min. 50 min.	Tech. 50 min. Draw. 30 min. Lang. 40 min.		Tech. 25 min. Soci. 20 min. Calc. 35 min. Lang. 40 min.	
	Day four		Day five		Day six	
	Tech. 35 min. Calc. 20 min. Scie. 25 min. Lang. 40 min.		Soci. 30 min. Calc. 30 min. Scie. 60 min.		Practice Consoldn. Revision	120 min.

Table 11. Timetable of a sequence included in the first training cycle : "Plant diseases"

SEQUENCE 2	Day one		Day two	
	Revision of previous sequences Introduction of the new topic Common plan for implementing the sequence target	25 min. 35 min. 30 min.	Technical instruction Calculation Language	20 min. 30 min. 40 min.
	Day three		Day four	
	Technical instruction Calculation Language Science	20 min. 25 min. 25 min. 20 min.	Technical instruction Calculation Language Socio-economy	20 min. 25 min. 25 min. 20 min.
	Day five			
	Technical instruction Consolidation and revision	25 min. 65 min.		

Table 12. Integration of language learning and technical knowledge

	FIRST SEQUENCE	SECOND SEQUENCE	THIRD SEQUENCE	FOURTH SEQUENCE	FIFTH SEQUENCE
	ABOUT STEEL MILL	DEVELOPMENT OF REEZE	CHANGES IN WORKING HABITS	SAFETY	TEAM WORK
POSTER					
PHRASE RELATING TO POSTER	این کوره بلند است	ما یک شهر جدید می سازیم	ساعت جای خورشید را می گیرد	احمد در مرز خطر است	در کار با هم شریک هستیم
PHONETIC TRANSLATION	IN KUREH AST	MA YEK SHAHRE JADID MISAZIM	SAAT JAIGOZINE KHOR-SHID MISHAVAC	AHMAD DAR MARADE KHATAR AST	DAR KAR BAHAM SHARIK HASTIM
ENGLISH TRANSLATION	THIS IS THE BLAST FURNACE	WE BUILD A NEW CITY	THE CLOCK REPLACES THE SUN	AHMAD IS IN DANGER	WE WORK IN UNISON
	1	2	3	4	5
WORD	کوره	شهر	خورشید	خطر	هستیم
SYLLABLES	کو ره	شهر	خور شید	خط ر	هست یم
LETTERS AND VOWEL POINTS	ک و ر ه	ش ـ ـ ه ر	خ و ر ش ـ ـ د	خ ـ ـ ط ر	ه س ـ ـ ت ی م
EXERCISES	ک و ک / ر و / ر ه / ک و ر ه / ک و ک ر ه / ک و ر ک / ر ک / ک ر / ک ر ک / ک ر ک ر ک	ش / ش ا / ش ا ر / ش ا ر ه / ش ه ر / ه ر / ه ر ش / ه ر ش ه / ه ر ش ه ر	خ / خ و / خ و ر / ش / ش ی / ش ی د / د / د ی / د ی د		س / س ا / س ا ت / س ت / م / م ه / س ت ه / س ت ه م
NEW WORDS	→ کور	کر . شور . سر . شهر	خرد . کود . رود . شید . قدد . در . دید	خط . شط . دود . خر .	سرد . رسم . گر . تور . سیم . تیم

N.B. ONE SEQUENCE = ONE WORKING WEEK . ONE WORKING WEEK = FIVE WORKING DAYS

LEVEL OF ACHIEVEMENT AT THE END OF THE FIFTH WEEK

- PHRASES LEARNED GLOBALLY
- ELEMENTS EXTRACTED FROM THE ABOVE MENTIONED PHRASES AND LEARNED BY ANALYSIS
  a) WORDS : 5
  b) SYLLABLES 9
  c) LETTERS : 16 . VOWEL POINTS
  d) SHAPES : 28

BASIC SYNTACTIC STRUCTURES :

I PHRASES 1 . 2 . 3
(SUBJ . VERB . OBJECT)

II PHRASES 4 . 5
(SUBJ . VERB . COMPLEMENT)

NEW ACQUISITIONS :

WORDS COMPOSED OF THE LETTERS ALREADY LEARNED : 22
PHRASES COMPOSED OF THE WORDS ALREADY LEARNED : 2 (see below)

1) در شهر هستیم
DAR SHAHR HASTIM
WE ARE IN THE CITY

2) ما یک کوره جدید می سازیم

letters and vowel-points, and analysed. In a final stage, the instructor invites the group to compose further sentences on the same subject, to enable each adult member to test his ability to express himself freely and without prompting. The pilot project staff consider that, with a stock of approximately 200 newly learnt words, the students can, during this final stage, take their first independent steps in expressing themselves in writing.

In this way, the elements involved in intellectualization (reading, writing, symbols) are integrated with the technical, vocational and socio-economic elements. In this process of integration, moreover, educational programming is completely subordinated to technical programming. Literacy work thus serves a purpose in so far as it facilitates and, in some cases, speeds up the process of intellectualizing technical problems.

In the second case under consideration, integration may be particularly thoroughgoing, as is indicated by the initial sequences of the first training cycle of the general agricultural programme.

Lastly, with regard to the third case, we have chosen a purely visual example which illustrates perfectly the integration of technical drawing with technical programme content. The illustration overleaf concerns a sequence linked to the central topic of the circuit.

Integration of mathematics with a programme's technical content

Technical topics	*Identification of the mathematical concepts inherent in the technical content*	*Finding adults' related practical experience*	*Elicitation of rule or formula*	*Inventory of principal operations entailed in the mathematical concepts*	*Basic mechanical operations to be imparted during the first 11 weeks, listed in a didactic progression*
1. Allocation of land for various uses	Area	Adults' own problems with fields and land apportionment	Area = Length x Width	Numeration Linear measurement and its units Addition, multiplication Linear measurement Division, subtraction Time units Distance Speed Division Monetary units Multiplication Division Weight and volume units Weight units Area Multiplication Volume, speed, time Weight, volume, division Fractions, division, etc. Basic processes as above Percentage, time, etc. Yield Scale Graph reading Plant	Numeration Addition
2. Planting out	Arithmetical and geometrical progression	Adults' own methods of planting field	$\frac{\text{Length}}{\text{Number}} = \text{Distance between plants}$		Subtraction
3. Ploughing or digging	Speed, depth, time, money, angle	Adults' experience in digging and ploughing	$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$		Multiplication
4. Application of fertilizer	Proportion, fraction, weight, volume, area	Adults' own methods and experience	Rule of three		Division
5. Spraying	Pressure, volume, area	Adults' experiences in these matters	$\text{Quantity} = \text{Area} \times \frac{\text{Quantity}}{\text{Unit area}}$		Linear measurement Weight measurement
6. Irrigation	Rate of flow, volume, time	Adults' traditional methods and knowledge	$\text{Flow} = \frac{\text{Volume}}{\text{Unit of time}}$		Speed, time
7. Harvesting	Yield per unit of area	Adults' own experience	Weight or volume per unit of area		Area
8. Quality and wastage	Fraction and percentage	Adults' own experience	Part related to whole and 100 as unit		Volume
9. Marketing	Costs and prices	Adults' own experience	Profit, selling price, overheads, etc.		Fractions
10. Storage and ensilage	Maximum exploitation of products	Adults' own experience	Cost, benefit, etc.		Percentage
11. Credit	Interest	Adults' own experience	Interest rates		Monetary units

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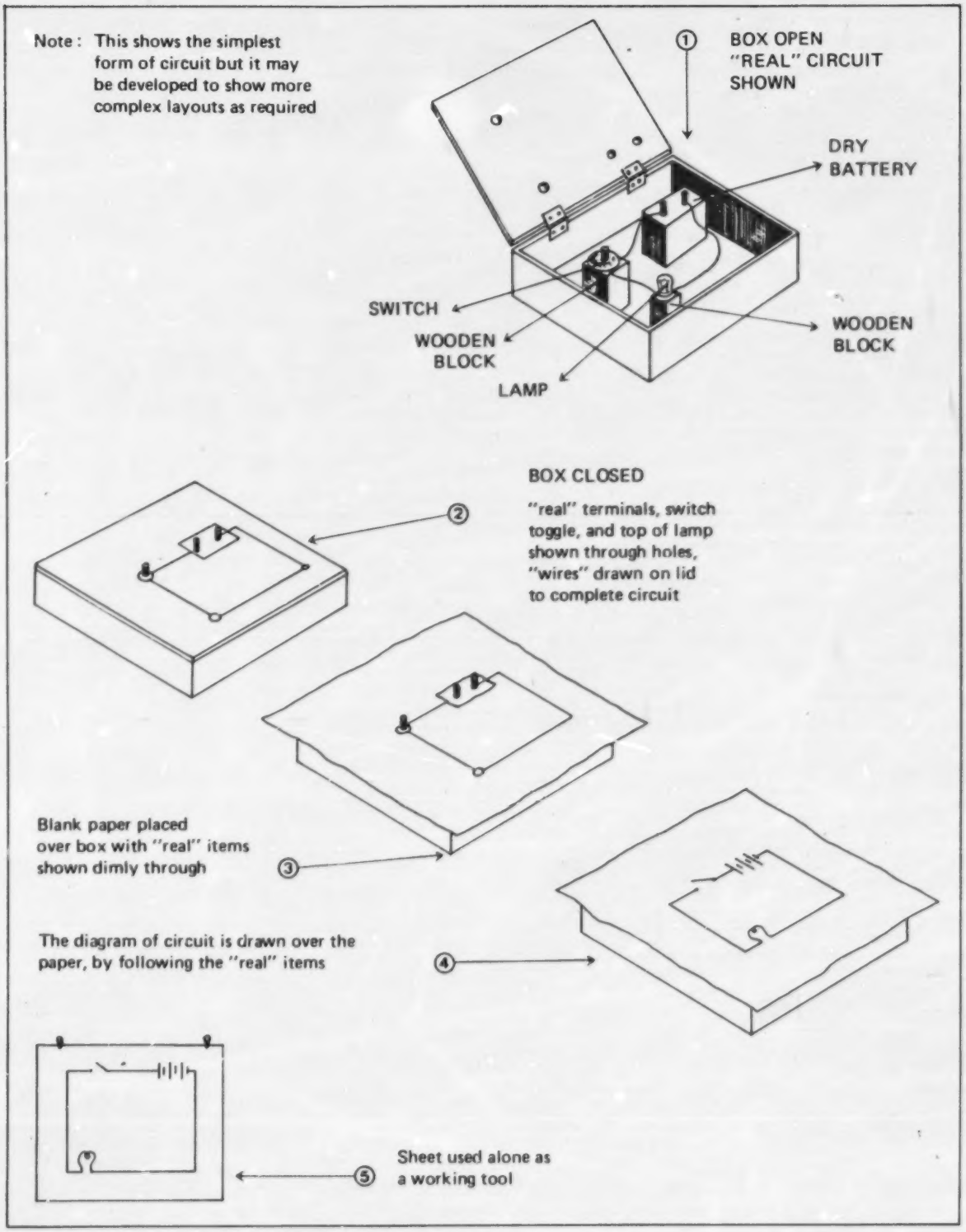

Note : This shows the simplest form of circuit but it may be developed to show more complex layouts as required
① BOX OPEN "REAL" CIRCUIT SHOWN
DRY BATTERY
SWITCH
WOODEN BLOCK
WOODEN BLOCK
LAMP
BOX CLOSED
"real" terminals, switch toggle, and top of lamp shown through holes, "wires" drawn on lid to complete circuit
②
Blank paper placed over box with "real" items shown dimly through
③
The diagram of circuit is drawn over the paper, by following the "real" items
④
⑤
Sheet used alone as a working tool

Integration of technical drawing with technical programme content

THE TEACHING MATERIALS

In view of the teaching method selected for the Iranian project, the question of materials had to be looked at from an entirely new standpoint. It was difficult, indeed, to adopt the solutions - so readily available - of a set type of curriculum, spelling primers and reader or readers for the pupils and manuals for the instructors. Methodology of a complex kind demanded materials that would be clear and systematic enough to reassure the participants in the groups and, at the same time, be so imaginative and stimulating that they would be encouraged to use their own initiative.

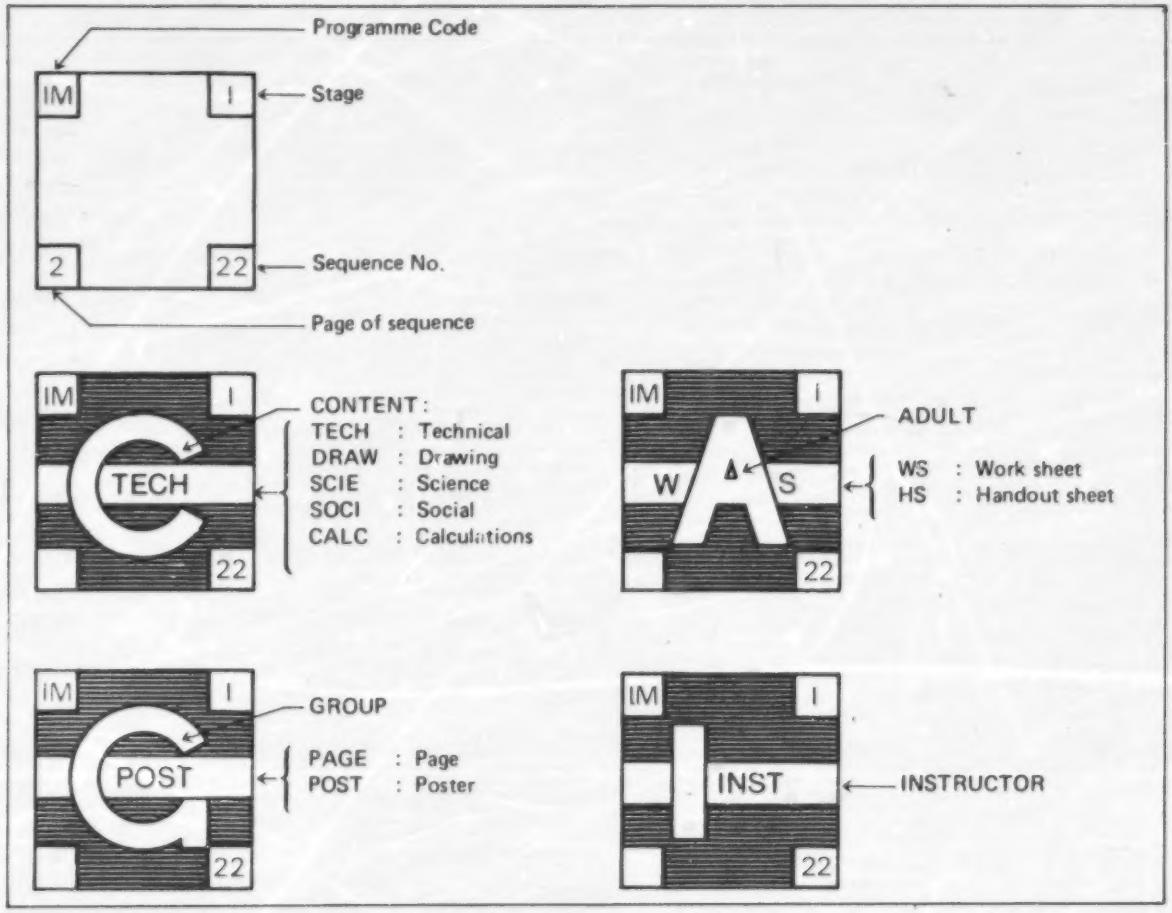
After numerous experiments, a set of teaching materials was worked out for each sequence by the Iranian project team, consisting of:

A set of short texts "C" accompanied by the essential graphic material. This set corresponds to the objective content of the sequence, arranged in accordance with the basic operations. It is primarily intended for the information and training of instructors.

For group work, concise material "G" consisting of a poster summarizing the theme of the sequence, and one or two sheets for each participant, to serve as technical notes. By collecting these sheets each adult can make up his own book.

Semi-programmed material "A", which includes either individual evaluation cards or work sheets. Adults can use these to go on studying, so that their initial instruction may be continued by individual effort.

Teaching notes "I" for instructors. They draw attention to certain difficulties in the sequence, suggest lines of action to be followed and appropriate explanations and, lastly, provide the preparation for their evaluation work.



System of classification of teaching materials

Although the preparation of models and the mass production of teaching aids have been intensively developed, the use of audio-visual media, on the other hand, has been fairly limited in the Iranian project, even though a key rôle was assigned to such methods in the Plan of Operations.

Although traditional art in Esfahan is highly developed in regard to miniatures and calligraphy, it was found difficult to get artists and craftsmen to help with the pilot project, as, for example, in the production of the numerous posters demanded by the method selected. There was accordingly a considerable delay in the production of this important visual material, which, apart from a few examples, has been of rather poor quality. Use of colour is, moreover, practically non-existent.

Nor have radio programmes produced the expected results, despite interesting experiments in which the hearing of new words is associated with their graphic representation on posters. The Iranian project has not succeeded in coming up with a practical solution to the classic problem of synchronizing broadcasting and listening times. Attempts to arrange broadcasts to coincide with the group timetable have been abandoned, since each time the workers changed their shift their time-table was altered accordingly. In addition, differences in training levels have meant that audiences have had to be split up and this reduces the number of occasions when all groups could really benefit from the same broadcast.

Radio, like the cinema, has been used essentially as a means of strengthening motivation (explaining the purpose of the project to the general public, encouraging adult participation or arousing interest in literacy in general). There is, however, a possibility in the near future - when the project reaches the post-literacy phases - that experiments in organizing cultural activities can be undertaken by using, for example, the transmitter that will be functioning shortly in Dezful.

WORKING WITH OTHERS

One of the most fascinating aspects of the methodology applied in the Iranian project is the fact that it is the result of what has been fundamentally group work. Educators, the traditional authorities for dealing with educational issues, have thus been obliged not only to work in conjunction with those in other professions and to take account of factors which lie outside their control, but even at times to bow to demands of a non-educational kind. For such educators, their practical task is the difficult process of learning how to work with others instead of for them - and even, ultimately, through them.

This means first of all, working with the "pupils". They are no longer mere "illiterates" - i. e. defined by the knowledge that they lack - but adults who have sometimes achieved a high degree of skill in traditional techniques, notwithstanding their educational handicap. Probably because survey techniques do not have a sufficiently practical basis, plus the fact that hardly any of the international experts knew any Persian, the project has only occasionally succeeded in obtaining the participation of adults in the drawing up of programmes. In Dezful, however, there are already a few instances in which new literates have, in turn, become instructors. The participation of adults can also be obtained indirectly through evaluation procedures which can serve as a feedback system, modifying the initial programming in the light of training results.

Then there is work with the specialists. As has already been pointed out, the Iranian project has been assisted by several outside institutions. Unfortunately the period of such co-operation (under contract) has not been long enough to ensure that specialists and educators have developed a really close working relationship. The work of the Iranian specialists has also been restricted by difficulty in obtaining the secondment for field work of experts from other ministries. In addition there is the well-known fact that specialists are not always in the habit of seeing problems in terms of future educational work. Lastly, most of the specialists involved in the pilot project had no previous experience of combining vocational training with the process of learning to "intellectualize".

Between these two categories are to be found the project's "foot soldiers", i. e. the instructors who work directly with groups of 25 to 30 adults.

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An Iranian specialist talking to a farmer

Ideally, it had been hoped to recruit mainly "monitors" drawn from the same social and occupational spheres as the students themselves, in order to ensure that vocational training proper and the other aspects of training went hand in hand, but there were not many takers. Tensions also arose with the "supervisors", recruited from the formal educational system, who found it difficult to accept that persons who were not teachers by profession

could be competent educators. Nevertheless, certain experiments employing monitors, particularly at the Reeze metallurgical works, have yielded remarkable results.

Be this as it may, in view of the fact that the national staff of the pilot project are directly responsible to the Ministry of Education, almost all the instructors were recruited from among primary school teachers and, occasionally, former "sepahis" of the Education Corps. At Dezful, a considerable proportion of the instructors were married couples, who were thus able to reach all members of the village communities, unrestricted by the segregation of the sexes which has proved such a barrier in other Iranian programmes. Thanks to the comprehensive nature of their action, these couples were able to play the part of "animateurs" or community project organizers, which resulted in some cases in the formation of small community nuclei, the forerunners of future cultural centres.

To be sure, the mere fact of finding themselves in a working environment so far removed from that of the school is in itself a salutary experience for professional teachers, who tend to shut themselves off in the highly artificial world of the school system. But functional literacy work involves more than this. It raises the question of how to give these teachers an awareness of, and a grounding in, technology. What special training should be provided for them and for how long? Though those responsible for the Iranian project all agree that the aim must be nothing less than the re-training of these teachers, two different approaches have emerged. Some advocate an initial training period long enough (up to a month) to provide them with a solid grounding, to be followed up and supplemented during monthly sessions organized to prepare the sequences, at the rate of one half day of instruction, demonstration and practical exercises for a single sequence per month. Others propose that initial training be reduced to one or two weeks, with provision where necessary for regular week-long periods of further training organized in "centres of excellence"; these would be set up at key points of the pilot project and placed under the responsibility of instructors of outstanding worth, who would be able to give practical training to their less-gifted fellow teachers.

Whatever the solution adopted, it is clear that the question of the training (considered as a continuing process, embracing further training) of the instructors is crucial to the effort to extend the project. It is not impossible that this re-training of primary teachers may one day have a considerable, and moreover highly desirable, impact upon the entire educational system. For the moment, however, there is little sign of this happening.

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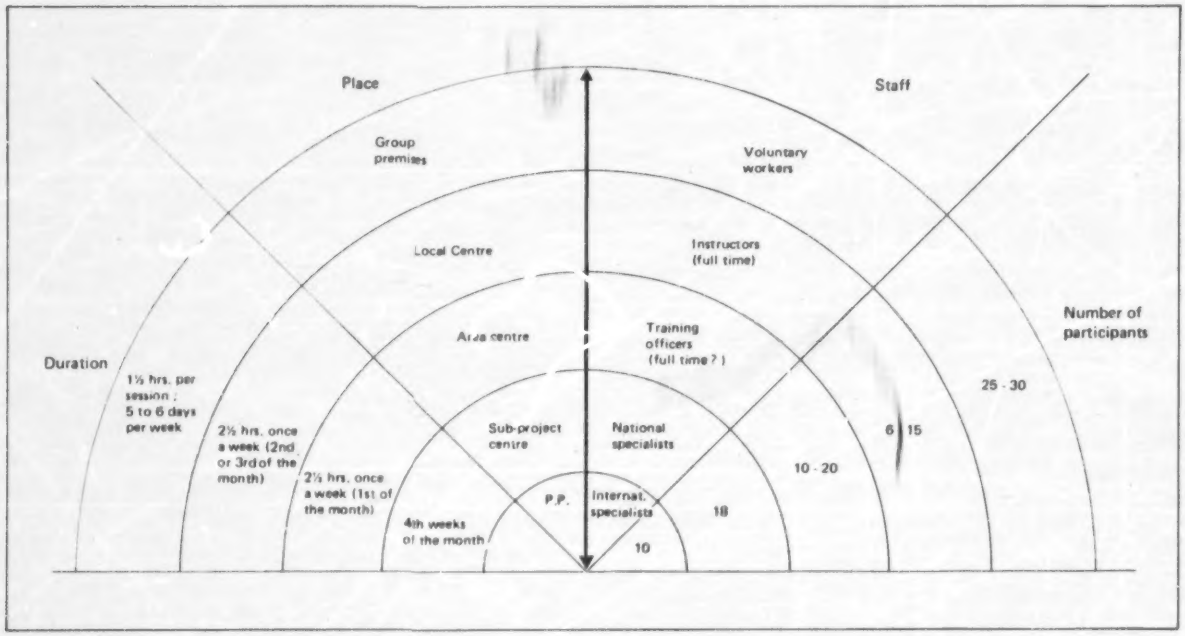

Diagram of the continuous system for training pilot project personnel

In order to expedite the solution of this problem, efforts were focused on decentralizing training and further training by means of a supervisory system operated by training officers. This sytem is also designed to secure the feedback of information from the grass-roots to project centres. Each group of some 6 to 15 teachers is directed, guided and supported by a full-time training officer. These training officers, who have received the equivalent of twelve years of schooling, are responsible for the initial re-training of the teachers, for their continuous refresher training and, needless to say, for supervising their work. They thus act as educational counsellors. There are between ten and twenty operating in each sector, themselves directly responsible to the national members of the subproject team responsible for a given operational sector. The training officers thus serve as intermediaries between the centre and the outposts of the pilot project, conveying information and feeding it back. This system of action and reaction between the field workers and the central team consequently involves a continuous process of refresher training for all staff working on the project, whatever their individual educational level and their functions.

Chapter IV

The old and the new

"In villages, towns, and cities, literacy classes have reached tens of thousands of people, mostly adults who have never had the advantage of any schooling. But the ability to read and write is merely a tool and can easily do more harm than good if not used in the right way. This had led to broaden our outlook on the literacy question and to institute a programme of fundamental education which stresses the application of literacy skills to real life situations. I see marvellous prospects here, of which we must take full advantage."

H. I. M. the Shahinshah (Maemuriāt barayē vātanam - Mission for my Country)

A PROJECT WHICH CONTINUOUSLY TRANSCENDS ITS OWN LIMITATIONS

The operational history of any development project shows that it is vain, and perhaps even mistaken, to wish to abide at all costs by initial intentions as these are set out, for example, in a plan of operations. Indeed, we venture to suggest that to cling obstinately to them is perhaps the most effective way to bring a project to grief. This does not mean signing a blank cheque, but it does mean that the process of revising a plan of operations might be less long-drawn-out and above all less drastic.

It would seem, in fact, that the practice followed hitherto allows for revision only when the execution of a project is disturbed by an external event, as for example when it becomes apparent that the preparatory studies for the plan of operations have grossly underestimated the magnitude of the obstacles, or failed to make adequate provision for surmounting them. Such situations have affected the Iranian project, as for example when the KWPA reappropriated a section of the irrigated area where it had been planned to locate the experimental zone of the Dezful sub-project, or again when the attempt was made to found the Esfahan sub-project on the desire - illusory, as it turned out - of the managers of certain of the city's industries for modernization.

We have, however, also seen that the objectives and the work plan of the Iranian project were constantly readjusted as a result of:

- an effort to clarify its overall aim, its "philosophy" as expressed simply in the definition of functional literacy (Chapter I);
- a strengthening of the ties between the educational activities and the frame of reference within which functional literacy operates (Chapter II);
- a systematic effort to work out a specific methodology (Chapter III).

This concern to go beyond the results already obtained created in the Iranian project an attitude of mind favourable alike to self-criticism and to imagination, producing a climate which proved most favourable to experimentation, even if, as we shall see later, the experiments carried out as part of the project did not always abide sufficiently by the rules governing rigorous scientific experimentation. It is, in fact, only since 1969, when the evaluation section was taken firmly in hand and became capable of keeping a check on the experiments, that methodological experimentation has given measurable results.

In taking such a resolute course it was, moreover, inevitable that established professional practice, the habits and theoretical assumptions of all those working on the project should be called in question, thus causing reservations and even resistance on

the part not only of the Iranian but also of the international staff. Naturally, then, tensions and conflicts arose, but there was also, and far more seriously, a much too rapid attrition of international staff, which resulted in an excessive turnover. Those responsible for the management and evaluation of the project have been deeply concerned by this situation and have put forward a series of measures designed to enable Unesco to minimize this waste of talents. It would, for example, be helpful to rethink the post descriptions for experimental projects, so as to make them more specific and to allow of their being reframed in accordance with the changing objectives of the operation.

The first difficulty is to define exactly what skills are required. Which scientific disciplines should as a matter of course be represented in the basic team? Would it not be advisable to specify certain specialized educational qualifications? An "adult educator", for example, is not necessarily an adult education programming specialist, nor even necessarily capable of coping with the difficult methodological problems involved in integrating the training programmes and finding new solutions to them. Conversely, a programming or methodology specialist is not necessarily a specialist in the training of instructors. Such categories doubtless do not even exist in most of the countries which are able to provide international experts. This is the reason why the Iranian project has attached increasing importance to enlisting the temporary services of consultants. Precisely for this reason, Unesco might perhaps encourage the training of such specialists by transforming the pilot projects carried out under the experimental programme into project schools.

The second difficulty is in making the transition from a multidisciplinary conception of the integrated approach (that is, the conjunction of coexisting skills) to an interdisciplinary approach (based on the give-and-take between different methodologies). This is particularly true in the case of experts in the different development sectors. It is one thing to analyse a socio-occupational sector and to identify the various bottlenecks; it is quite a different thing to break down a professional problem in order to determine the basic elements of the training course content and to grasp how they fit together at the psycho-sociological level, with a view to helping the methodology specialist to establish the sequences of the learning operations. It might well be advisable, therefore, before posting an expert to a functional literacy project, to provide him, in addition to the customary briefing, with a practical grounding in the specific working method used on this type of project?

The third difficulty is bound up with the crucial importance of the quality of the expert's relationship to the community in which he is to work. The functional approach, excluding as it does all a priori assumptions, entails:

familiarity with the distinctive structural features and particularly with the attitude of the country's administrative authorities;

sufficient knowledge of the language to permit direct communication with instructors and adults;

an informed and discerning understanding of the distinctive features of the national cultural background, especially complex in Iran's case.

With benefit of hindsight, it can be said that the fact that not one of the international experts possessed a satisfactory knowledge of Persian and that those who succeeded in acquiring a smattering were few and far between was at the root of the professional misunderstandings and the cultural obstacles which engendered not only a feeling of isolation among the international experts but also occasional outbursts of mutual impatience. If this view - which we fully share - is granted, then it follows that all functional literacy pilot projects should set aside a fairly lengthy period - a minimum, say, of six months - for the linguistic, cultural and methodological training of the basic team. It is evident that this requirement would probably entail a re-examination of the methods of recruitment of international staff, with a resultant lengthening of appointments.

EXPERIMENTAL EDUCATION OR EDUCATION BASED ON EXPERIENCE?

There are probably few more controversial questions today than that of experimental education, particularly if its purpose is to make educational action more effective by ensuring that it is carried out in compliance with the criteria of scientific experimentation.

It in fact pre-supposes a model to be tested, a series of hypotheses to be verified, the existence of experimental groups and test groups, a set of variables - limited if possible - to be taken into consideration, the systematic recording of observations for future filing and classification and, lastly, an evaluation which culminates in concrete measures designed to correct the educational action where necessary and to set standards governing its application and extension. Teachers do not take readily to this discipline, either because they have grown accustomed to mistaking their strokes of ingenuity for rigorous experimentation or because they are fearful of being bound by laboratory-type situations - concerned as they are with the urgency of action - or, finally, because they consider themselves to be first and foremost "inventors".

The Iranian project was not exempt from such tensions, which increased as the evaluation section was built up and succeeded in devising a practical method of checking results. They were, moreover, compounded by other, more specific factors. When, at the beginning of 1967, the pilot project jumped the gun, the result was, as has been seen, a

thorough confusion of methods, conventional solutions coexisting with ideas which, though ingenious, were too lacking in cohesion. Confronted by what they considered to be absolute chaos, and convinced as they were that the Teheran Conference had marked a break not only at the theoretical, but also at the practical level between the so-called traditional conception of literacy and that implied in the principles guiding the Conference, the educational directors of the pilot project made it their exclusive concern to work out an original methodology. To achieve this, they had to demonstrate that if certain principles were adhered to, a totally new methodology, a new method of organizing learning and new teaching tools must, of necessity, be adopted.

In the previous chapter, we saw that this twofold effort to take a creative and at the same time coherent approach not only yielded fruitful results but was, moreover, achieved in the field. In so far as all the new ideas were tried out in practice, it could be said that this educational approach had been put to the test of experience, but it is still not truly experimental in the sense of having been put to the test of comparison. Indeed, we can say that it has hardly been open to comparison throughout the first three years during which it was worked out. This is borne out by the discussion which arose in 1970, when the directing staff of the pilot project agreed to the possibility of using three separate methods of learning to read and write at one and the same time.

The advocates of a "purist" conception of functional literacy teaching considered that only one methodology, that of supervised self-instruction, suited the purpose, concluding from this that a single method of learning to read and write was required. This was a look-and-say method using from the start sentences which transmit a complete message linked to the technical content of the course. These sentences gradually increase in number and complexity, and are used for the purpose of identifying the basic structures of language. It is thus essential, in the view of these educators, to teach the adult from the outset to read and write[1] the living language which serves as the medium of expression for his thought, his experience of life and, in the case of functional literacy, his professional knowledge. For reasons of principle these educators consider it inconsistent to acknowledge the other two methods of learning to read and write proposed by their colleagues.

The first of these - advocated by the international expert B. Lamto (ILO) - is designed to provide a grounding in the shortest possible time (six weeks) in the basic processes of reading and writing Persian. It involves setting aside a period solely for this purpose prior to the start of the integrated learning programme, and taking as a starting point 94 key-words, drawn from the technical vocabulary involved. Although these may be employed to discuss a specific technical topic, they are not so rigorously linked to the progression of the technical content as in the case of the method propounded by the "purists". These words arranged by syllables, are set out on two discs which, when manipulated by the student, cause the words to appear one after another, at the same time drawing the student's attention to one of the letters of which the word is formed.

The second method (devised by the Iranian engineer Soraya) is based on words and sentences related to the technical programme content, but chosen for their phonetic progression. It starts by introducing each of these key words, highlighting one of their constituent letters. These letters are then used gradually to build up other words, then sentences, always referring back to the technical content. This method limits the transmission of technical messages, particularly during the first months, inasmuch as the sentences are built up only of words composed with letters that have already been learnt.

These discussions had the merit of winning over some of the doubters and posing in clear-cut terms the question of experimentation. As a result of these conflicts, those responsible for the pilot project decided to take the plunge. At the end of 1970, urged on by the evaluation section, they decided to embark upon genuine experiments. The purpose of one of these is to compare the results of the so-called traditional method used by the Iranian National Committee and those of the "pure" functional literacy method applied by the pilot project. The experiment is being conducted in a zinc mine and is designed to assess:

the process of learning to read, measured by reference to variables depending on the literacy programme;
the development of students' knowledge, measured by the number of words which they have understood and assimilated and are capable of defining;
the retention of literacy skills;
the changes of attitude of the workers.

Comparison will be based upon the results obtained with two sets of homogeneous and balanced groups of 30 workers, some of them belonging to the first working team and applying the Iranian National Committee's method, the others belonging to the second team and using the pilot project method.

It would thus seem that the pilot project has indeed gone beyond the stage of invention, but has it achieved the transition from invention to systematic innovation? Has it acquired the capacity to disseminate its inventions, to win their acceptance by other groups, and to make them understood by the instructors, regardless of their educational level? And is it capable of bringing about changes in the structures which reject them?

1. Note the emphasis on writing.

FROM INVENTION TO SYSTEMATIC INNOVATION

As the Iranian project has so far been carried out under the auspices of the Ministry of Education, the specialists, training officers and instructors employed on it have almost all been chosen from among the personnel of that Ministry. There has accordingly been no question of setting up a completely new national team. Staff not only needed refresher training but indeed, in many cases, retraining. From the outset, the Iranian project was faced with problems of innovation. Should it succeed in finding a solution to these problems, it would gain direct access to a professional community which has hitherto been little amenable to change, to say nothing of the multiplier effect such innovation might have on the regeneration of education as a whole in Iran.

In a civilization in which education is based on rigidly authoritarian and hierarchical relationships, this is no easy task. Authoritarian structures are built into the entire educational system and, in particular, into its conception of "inspection" - a term which we prefer to see replaced by "supervision". Instead of providing him with an opportunity to offer guidance, the supervisor's function is seen as being a purely administrative one of "checking up" and one which involves certain rights over others. We have ourselves witnessed training officers who, not content to act simply as animateurs, have taken over from the instructors. It was all the more difficult to break these traditions and to introduce new habits in that most of the instructors are not employed full-time on the project, but go in for functional literacy teaching as a sideline to their normal teaching duties. Likewise, the training officers were hard put to it to break free from the traditional pattern of inspection which they had seen practised by the supervisors. This gave rise to regrettable situations, like one we saw at the iron-works, where a training officer criticized an instructor - himself a foreman - for failing to live up to his image of the "good teacher".

Uncertainty as to the training officer's role also constitutes a serious obstacle to determining how thorough an understanding the majority of instructors have gained of the methodology. Some have undoubtedly grasped it perfectly, but many others cling so obstinately to their usual teaching methods that they appear rather to be reeling off instructions learnt by rote than making use of properly mastered techniques. What will happen once supervision is relaxed? Will not a great many instructors return, for example, to the National Committee's method, which has the virtue - albeit relative - of making them feel more at home? Are we certain that the instructors are themselves well enough educated to be able to provide instruction in the fairly extensive spheres of knowledge that functional literacy entails? And how many of them find themselves having to talk about instruments and machines which they have no experience in handling? How many do more than simply imagine a working environment in which they have probably never set foot? These doubts concerning the project's "foot soldiers" are all the more serious inasmuch as it is soon to enter a stage of development in which, instead of the few dozen instructors per sector, there will be several hundred.

As several consultants have suggested, this difficulty experienced by the teaching community in adapting itself is possibly the result of a too dogmatic approach to their re-training. The pilot project sought to win supporters for its own method, instead of allowing a gradual process of understanding, deepening awareness and change to take place in people whom it was first and foremost necessary to convince of the need for change. Another cause of the difficulties encountered was the tendency to consider the teaching community as a homogeneous whole, onto which was superimposed a group of training officers responsible primarily for supervising and not educating the teachers. Would it not have been advisable to make more of the proposals put forward by C. E. Beeby, who advocated a more education-oriented approach to the teachers themselves? His policy was to single out those instructors who had grasped the idea, giving them a full-time, key position in the establishment of the project, in what he termed "centres of excellence". These centres would be attended regularly by a second category of instructors, who, though they had not yet fully mastered the methodology, were sufficiently concerned to improve themselves to be able to grasp the essential principles rapidly. For the less gifted instructors forming the third category, who primarily needed reassurance, the programming of courses was to be as detailed as possible so as to avoid the most obvious mistakes, without, however, their being required to undergo a thorough re-training in the new methodology. The training officers were to be responsible for this third category of instructors, making it their business to help them little by little to overcome their limitations. Lastly, there would be instructors engaged on the other Iranian campaigns who would continue their regular work, following traditional methods. A number of those who were willing might be selected to receive a grounding in the pilot project method.

An obvious prerequisite for a training strategy of this nature is the establishment of objective criteria for selection and advancement, if promotion is to be based on the quality of the professional performance contributed by the teachers to the development of the pilot project. This presupposes the existence and observance of a minimum body of regulations for those in the public employ. In this respect, the Iranian project is far from having achieved more than has been achieved in traditional government departments. It was really asking a lot to expect a pilot project to have something which not even an entire Ministry has got.

This is the reason why the solution of the conflicts

between the old and the new had on several occasions to be sought in an administrative reorganization of the project. This sometimes involved genuine administrative independence, or the project's being made the responsibility of ministries which were more sympathetic to the demands of modernization involved. The Iranian authorities have shown themselves to be fully conscious of these difficulties. They considered, however, that their solution was unlikely to be found in a direct confrontation with the existing school system.

THE IMPORTANCE OF EVALUATION

Evaluation is the key stage in any experimental programme, because in the end it decides not only whether the programme has "succeeded", but whether it has any significance. It also decides what lessons are to be learnt from the programme. Evaluation is also directly involved in the further development of the programme in that it provides a continuous feedback. Lastly, it is used by the project experts to see how they stand in relation to other experts and to the project as a whole. This last point is crucial if one wishes to understand the history of the pilot project, and must therefore be elaborated on.

In the first place, evaluation looks at what has been done and compares it both with the objectives and with the hopes and wishes of the target population. Then it measures the "internal efficiency" i. e. how the aims compare with the achievements in terms of training, thus making it possible to draw immediate conclusions about the educational standard of the teaching, in this case about the methods used. But evaluation is "external" too, when it is used to compare the training that has been given with the needs of the development process within which the planners were working.

Take first the "internal" evaluation of the pilot project. It would probably have been easier to get out of the stalemate of which we spoke in the last chapter, if evaluation had been able to play its full part right from the start. However, it was only from autumn 1969 onwards, two years late, that the evaluation section was able to discharge all its "internal" evaluation functions. To do so it needed not only the right methods, but also a complicated organization for which the minimum requirements were to work out objective ways of observing and measuring how the adults learnt, to check information sent in by the basic groups, to initiate instructors and training officers into the techniques and, above all, inculcate in them the spirit of self-evaluation.

But what had been happening before this radical change? As we said above, the educators in the pilot project had endeavoured to concentrate all their joint efforts on working out a single method. As a result, they were not very attentive or receptive to comparisons. What is more, there had come to be something of a rift between the teaching section and the first evaluation team as a result of the delay in producing the basic diagnosis. In the Plan of Operations, the idea had been that the evaluation section would, during the preparatory period, work out a baseline survey which would give the educators the indispensable information without which they could not plan their programmes.

This work took the evaluation team, using only its own resources, a long time to complete. Especially at Esfahan, it did not even go far enough with its analysis. The educators, consequently, got used to fending for themselves, occasionally taking up some hint or other from the evaluation documents. We should also note that the working habits of the educators did not make the evaluation team's work any easier. For instance, for the educators, what was important was to have working groups which worked, even if there was a constant turnover bringing in new members to replace the adults who dropped out. This almost perpetual change in group membership (encouraged by instructors who wanted to keep the numbers in their group up to an optimum level, so as to keep up their wages) did not interfere too much with the working out, trying out and dissemination of methods. For evaluation purposes, on the other hand, such a "group" loses any value as a statistical unit. In extreme cases, it prevented objective experiment.

In 1969, Mr. Bazany was thus faced with a considerable task. The evaluation section had firstly to be reorganized. Next, strict rules had to be laid down to provide for systematic collection of objective data from the grass-roots level - which involved defining the indicators, fixing and observing deadlines for the various reports from the groups, and regularly checking the information, the sources of which were very varied and which was in some cases being doctored to suit the professional interests of those submitting the information. But there were also more complicated problems to be solved. Thus, in any experimental project, the very development of the methodology involves a continual modification of aims, even though some of those aims remained unchanged. Finally it had to be recognized that in the particular situation in which the project found itself, far too many factors were still unknown or little known. The only alternative was to opt for a set of assumptions which would continually be tested. This situation could be summed up by saying that the evaluation of the Iranian pilot project has since 1969 been run on the very modern principle of relativity.

By the end of 1969, the system was already starting to work. Gradually the evaluation section was making up the ground lost by the previous team, so that at the end of 1971 an overall evaluation of the previous two years' work (1969-1970) was possible.

It is thus probably too late for the findings to have any feedback effect on the teaching activities now under way. Some feelings of frustration might

be stirred up among the educators, who might think that they are there only to provide data, without ever being able to find out the results of the analyses and interpretations. We think it would be possible to overcome this difficulty by organizing a permanent training and refresher training system which would, as a matter of course, include feedback of information right down to the most elementary levels of teaching work. On the other hand, it must be stressed that these evaluation results come at the right time for the preparation of the extension of the project planned for the period of the Fifth National Plan.

So far we have considered only internal evaluation. However, as has been pointed out already in this chapter, there is also external evaluation. From the very beginning of work on the pilot project and in accordance with the World Programme, such evaluation has had very different aims from the other type. It had to check whether functional literacy teaching could contribute directly to socio-economic development better than "traditional" literacy teaching. In order to answer this question, the evaluation team had to undertake additional investigations on the following four levels:

at the national level, to collect facts and figures on population and the economy;

at the level of each sub-project, to obtain data on its socio-economic characteristics and on the development prospects in each sector of activity;

at the level of the communities concerned, to describe the new problems raised by development trends;

at the level of the individual programme participants to see exactly what the motivation of the adults was and to discover the psycho-economic factors which were exerting a favourable or unfavourable effect on the success of training.

From these various investigations, the evaluation team had to extract indicators which would allow them to measure the changes which had come about and which appeared to be the direct or indirect consequence of the functional literacy teaching work.

The least one can say is that the plan was very ambitious. As it was difficult to isolate the experiment from its context in order to take into account only those elements which depended on the work of the pilot project, and as it was not possible with the methodology initially suggested to achieve the objectives, Mr. Bazany and his co-workers very wisely decided to change their strategy completely. Instead of giving priority to external evaluation, they chose to take internal evaluation as far as possible. Since 1969, evaluation, therefore, has consisted primarily of checking whether the methodology laid down and worked out in the project is viable and what the measurable results of that methodology are.

This wise decision, however, does not exclude the possibility that the internal evaluation may come up with findings having a significance which goes beyond the educational framework of the methodology. This can be seen very clearly in the draft amendment to the Plan of Operations. The more precise definitions of aims in the draft amendment gave the evaluation section of the Iranian project an opportunity to take greater account of the particular circumstances of the country, where ultimately the basic question is whether functional literacy teaching has made any new contribution to the methods which have been used hitherto in Iran. This question involves a whole series of other questions. Is functional literacy teaching more expensive than other types, and why? What are its advantages? What are its limitations? What are the overall costs, direct and indirect, which it involves? Those in charge of the pilot project, whilst not omitting to measure the impact of the programmes on economic growth and social change, set the evaluation section a number of precise tasks:

to measure the relative effectiveness of traditional literacy teaching, of vocational training without literacy teaching and of functional literacy teaching;

to check which methods, techniques and instruments of literacy teaching are best suited to the socio-economic and socio-occupational circumstances of the social groups affected;

to study the links to be established between the technical programme content and the practical work involved in the training process, and also the effects of reinforcement and feedback;

to estimate the contribution of the various information media and of audio-visual aids;

to establish types and levels of instruction corresponding to various types of need (selection, training and further training methods);

to analyse the circumstances of the participation of illiterate adults (motivation, stimulation and maintenance of interest), and to compare homogeneous groups with heterogeneous;

to determine the optimum length of training cycles in relation to a particular criterion;

to study the question of which structures and techniques of organization and administration are best suited to the requirements of functional literacy teaching;

to calculate the costs and benefits of the various functional literacy programmes;

to set standards and criteria to facilitate the subordination of language-learning, from the point of view of vocabulary and grammar, to the technical content of the vocational training and agricultural extension programmes;

to analyse the measures taken to ensure that reading and writing skills are retained, and to encourage post-literacy work.

Obviously this evaluation programme will also depend on the rate at which the project develops, which will in turn depend on the decision to extend the scheme, taken at the end of 1970. It is not impossible that the planned expansion could cause an excessive flurry of activity, and assessment would again be made very difficult. The only advantage would be to demonstrate the efficacity of functional literacy teaching by spectacular results.

Conclusions

The future of the Iranian experiment

"Might we not set aside the traditional assumptions and imagine a new programme to train a new type of worker-doctor, less sophisticated perhaps, in the style of what we are trying to do in the functional literacy programme? ... For the result could lead us seriously to consider the use of methods similar to those employed in the regeneration of education in other areas, including medicine and public health".

H. E. Mr. M. Rahnema,
Iranian Ambassador

A PROTOTYPE OR A MODEL?

In the logic of an experimental programme, a project must be completed if possible within the time limit so that a balance-sheet may be drawn up and conclusions drawn which will confirm or otherwise the assumptions on which the whole was based. In the case of a project that is a constituent part of a world experimental programme, it is even more necessary. It is essential to call a halt if the project is to be compared with other projects.

But to apply this reasoning to the Iranian pilot project would have been to overlook the expectations aroused in the country by the project, expectations which were every bit as great as the resistance which, as we mentioned above, it encountered.

The pilot project might fairly be regarded as being like the first phase in the building of a prototype. During such an initial phase, money would be no object. Neither effort nor expense would be spared, since the only important consideration is that the prototype should be successful. However, as is well known, and as we in fact were told by one Iranian official, a prototype is always expensive. On the other hand, the same man went on, the prototype stage would become financially viable when we entered a second stage, the purpose of which would be to determine suitable conditions for volume production.

It is therefore not surprising that the project team has been, since about 1970, reflecting[1] on the prerequisites - and costs - of a transition from a project of relatively modest size to projects on an entirely different scale. We should, nevertheless, note that the argument that the cost of a prototype is recouped by reproducing it in large numbers had already occurred to those responsible for the micro-experiment at the Taj factory, i. e. one of the very first experiments in the project. They had even estimated that the cost per participant, which had amounted to some 13,000 rials, could be reduced to 6,000, in the case of a 25-strong group of workers, and even to as little as 681 rials in the case of a 1,000-strong group. Be that as it may, if we are to find an answer to such questions, we must start off by costing the project.

This idea of the "prototype", in our opinion, explains why costing and the assessment of performance were not a major preoccupation in the minds of Iranian officials. Another, more serious reason, explains the relative lack of interest in such matters. Iran's overall expenditure on the pilot project between 1967 and 1971 inclusive represents only a modest, not to say insignificant, proportion of the country's total expenditure on education: whereas

1. The increase in such interest enabled M. J. Smyth, from whom we have taken some of the figures quoted here, to analyse the costs and assess the performance in record time and to prepare a report which we await with the greatest interest.

between 1967 and 1971 Iran was spending between 126 and 467 million rials each year on the National Literacy Campaign, only between 4 and 55 million rials were being spent on the pilot project.

In fact, much more important than the cost per participant or total costs is the use to which the resources made available for the project have been put. We should like to take up two points from M. J. Smyth's analysis. The first is that, as might have been expected, the capital equipment involved is very small (2. 4 per cent). Indeed, functional literacy teaching needs no heavy capital equipment, much less any costly infrastructures. It stands or falls by virtue of its method. The second point is that the siting of the project's Central Office at Teheran was off-centre in relation to the Esfahan-Dezful axis, and involved excessive costs.

The Iranian Government, however, does not consider the project merely as a prototype, but also as a model, i. e. a structure which could be reproduced elsewhere. The Government has always stressed that it wanted to repeat this experiment. Although the principle of continuity, then, is acknowledged - which in itself is a proof of the government's support - no details are yet forthcoming as to what form the further development should take. In fact, what must first be taken into account is the national five-year plan, the execution of which begins in 1973. The next thing will be to draw the necessary conclusions from the expert reports of the consultants, analysing the methods which the project provides to ensure the multiplier effect. Finally, the choice will have to be made between various options:

- expansion by sectors, whereby each of the specific programmes established for each sector might be applied in the same sector, but to all illiterate workers;
- geographical expansion, whereby the general programmes might be extended to the whole of the country, using the work of the Literacy Corps, Health Corps, etc. as a basis;
- extension, i. e. transferring all the project activities to some other region, for example the region for which such work was planned in Iran's original request to UNDP.

From another point of view, which is in fact complementary to the first, the development of the pilot project might start with the setting up of permanent institutions to be responsible for the general extension of functional literacy teaching within the framework of the Fifth Plan, to which the "prototype" would be handed over. Such institutions might take the form either of a completely overhauled Department of Adult Education within the Ministry of Education, or of a National Institute for Vocational Training and Further Training, or might comprise a specially established, independent institute.

A further step might even be taken. We have seen that functional literacy teaching, especially in the setting of an enterprise, also calls in question all levels of training and skill improvement. Some overall scheme seemed necessary to us, not only in order to keep the balance between the various occupational groups, but also to create the best possible career prospects for the newly literate. There is no reason why we should not think in terms of another kind of expansion, this time at the level of structures, at which level the pilot project could well serve as a general model for the training of human resources, whatever the level of education or the branch of activity of those concerned. The pilot project would thus contribute to the training of middle-level personnel which, in areas as different from each other as public health and industrial production, are so sadly lacking in Iran. Finally, this approach has the advantage of making us reconsider the "post-literacy" problem.

FROM FUNCTIONAL LITERACY TO LIFE-LONG ADULT EDUCATION

The close association of functional literacy teaching and vocational training assumes that the post-literacy follow-up is given at least as much importance as the continuity of the learning process. During the recent International Education Year (1970), Unesco, indeed, repeated once again that functional literacy training is only the first stage in a life-long process of training. This principle was to some extent applied in the Iranian project, for instance, in the system provided for the continuous training of teachers, or in the very spirit of the methods that were worked out with the purpose of encouraging supervised self-instruction.

It is therefore surprising to say the least that this line of approach was not clearly developed either in the Plan of Operations or even in the draft amendment. When the latter document refers to it at all, it is in the "post-literacy" context, i. e. the context of a series of operations with the main aim of increasing the retention of literacy, as if it were a stock of acquired knowledge to be looked after or, at most, a capital which should be made to yield dividends.

As to the work actually done, there are reports from various places of co-operatives being timidly organized, but so far nothing systematic has been planned. There has hardly been any reference even to such things as the setting up of libraries and lending facilities and the preparation of reading material for the newly literate. The same applies to the recent setting up of cultural centres in rural areas. These shortcomings can be attributed with certainty to the fact that systematic functional literacy teaching started too late to have produced large, successive cohorts of the newly literate as yet. That is why the question of the post-literacy follow-up has really only had an echo in the Dezful sub-project, i. e. in those communities where the work had been going on for a long enough time.

Even if such work only comes second in chronological order, should it not already have been thought out? Is it not inconsistent to work out the first stage in such detail without knowing anything exact about the following stages? The task is all the more urgent in view of the fact that some Iranian officials are already alive to this problem. For the moment let us try to gather together the questions that we have heard asked.

Firstly, should a large-scale influx of the newly literate into existing educational institutions be encouraged? Alternatively, ought we not to take the risk of setting up a "parallel" system, distinct from the present school system, thus reducing the call made on the existing institutions and enabling new institutions to be set up? Could not such a parallel system bring together the various adult education movements in Iran and offer them new training institutions, which would give them the opportunity of prolonging their training? In other words, would this not offer a chance to try out a system of life-long education?

Whatever alternative is chosen, it will again force the project to break out of the present administrative framework, unless it is simply decided to link up with the present school system, i. e. to abandon the functional principle in the phases following literacy teaching proper.

Looking at it from another angle, ought not post-literacy work be seen in terms of an integrated approach which makes it part of the development of a cultural environment? Experience at Dezful showed that educational work called for support from such diverse quarters as crèches and kindergartens, that it required the existence of places suitable for communication, in the first instance purely and simply meeting places, then cultural exchange centres. Would it not be useful to extend such work to include cultural activities - in an area which is particularly lacking in cultural facilities? At the same time the problem of leisure arises - men with time on their hands during the off season, and women without enough free time. The imminent bringing into service of the Dezful sub-project transmitter might perhaps offer an opportunity for a new surge of crativity.

THE INTERNATIONAL CONSEQUENCES OF THE IRANIAN EXPERIMENT

Now that the Iranian project has clarified its intentions and worked out its own methods, and now that, with the impetus given by the new evaluation section, it has started a process of comparison and will have to solve a whole series of problems connected with initial training, continuous training and the periodic in-service training of a huge teaching staff, it has everything necessary to make it a project that others will come to study - except that there are no facilities for receiving them. The international experts have often expressed regret at having no time to deal adequately with the trainees and associate experts who have been through the project. Nevertheless, the Iranian project has contributed to the training and the preparation of personnel sensitive to the problems of functional literacy teaching in the framework of a symposium organized by the Unesco Regional Bureau of Education at Bangkok in 1969 for 11 Asian educators. If the Iranian project is to make a greater contribution to the training of international staff, of whom there is such a shortage in this area, it will be necessary to create special additional facilities. It would also be possible to give the International Institute for Adult Literacy Methods, Teheran, responsibility for organizing courses making good use of the rich fund of documents which the Institute possesses and of the experience acquired in the experimental sub-projects and the other Iranian experiments in adult training.

Another future use for the pilot project would be as a research laboratory using material collected by the evaluation section. Such research might be of interest to international research workers, and might be carried out in close co-operation with Iranian research institutes. Thus the Institute of Social Science of the University of Teheran has already planned a series of studies on the comparative costs of the various methods of literacy teaching tried in Iran, on the capacity of the staff and the administrative apparatus of the Ministry of Education to accept and understand the methods used in functional literacy teaching, on the consequences of international co-operation, and on the conditions of inter-ministerial collaboration. It is probable that after the progress made in the evaluation of the World Programme, other subjects of study will be defined. This, in itself, raises the problem, for the project, of the storage of information, for which no provision has as yet been made.

As observed in the foreword, the International significance of the Iranian project will depend on the final study which, in our opinion and without wishing to be paradoxical, will be as important as the achievements themselves. It is only on the basis of evaluation that it will be possible to draw up an objective balance-sheet, which we have refrained from doing here. What we have tried to do at most is to indicate the problems encountered by the Iranian and international team in its endeavour to develop the Teheran principles, the solutions that it has already managed to put forward, and the prospects which it suggests to any educator who is concerned not only with invention but also, and principally, with innovation.

Annexes[1]

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(1) The greater part of this bibliography, which is far from complete, has been compiled thanks to the co-operation of the Director and staff of the International Institute for Adult Literacy Methods (B. P. 1555, Teheran). We should like to express our particular appreciation to Miss Masoodeh Tafazoli for the willingness and amiability with which she carried out this thankless task.

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